

COLOR TELEVISION RECEIVER

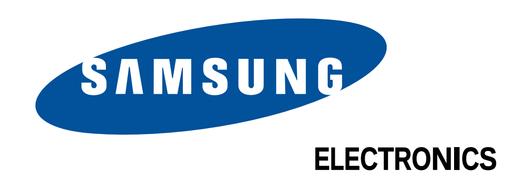
Chassis : SCT13B
Model: CK5039TR4X/BWT
CK5339TR4X/BWT
CK5039TR4S/NWT
CK5339TR4S/NWT

SERVICE Manual

COLOR TELEVISION RECEIVER



CONTENTS



Printed in Korea
3SCT13B-39K304

1. Precautions

Follow these safety, servicing and ESD precautions to prevent damage and protect against potential hazards such as electrical shock and X-rays.

1-1 Safety Precautions

1. Be sure that all of the built-in protective devices are replaced. Restore any missing protective shields.

2. When reinstalling the chassis and its assemblies, be sure to restore all protective devices, including: nonmetallic control knobs and compartment covers.

3. Make sure that there are no cabinet openings through which people—particularly children—might insert fingers and contact dangerous voltages. Such openings include the spacing between the picture tube and the cabinet mask, excessively wide cabinet ventilation slots, and improperly fitted back covers.

   If the measured resistance is less than 1.0 megohm or greater than 5.2 megohms, an abnormality exists that must be corrected before the unit is returned to the customer.

4. Leakage Current Hot Check (Figure 1-1): Warning: Do not use an isolation transformer during this test. Use a leakage-current tester or a metering system that complies with American National Standards Institute (ANIS C101.1, Leakage Current for Appliances), and Underwriters Laboratories (UL Publication UL1410, 59.7).

5. With the unit completely reassembled, plug the AC line cord directly into the power outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: antennas, handle brackets, metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

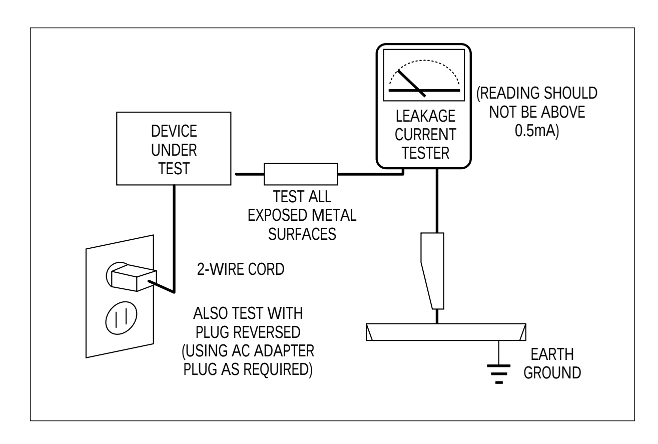


Fig. 1-1 AC Leakage Test

6. Antenna Cold Check:
   With the unit's AC plug disconnected from the AC source, connect an electrical jumper across the two AC prongs. Connect one lead of the ohmmeter to an AC prong. Connect the other lead to the coaxial connector.

7. X-ray Limits:
   The picture tube is especially designed to prohibit X-ray emissions. To ensure continued X-ray protection, replace the picture tube only with one that is the same type as the original. Carefully reinstall the picture tube shields and mounting hardware; these also provide X-ray protection.

8. High Voltage Limits:
   High voltage must be measured each time servicing is done on the B+, horizontal deflection or high voltage circuits. Correct operation of the X-ray protection circuits must be reconfirmed whenever they are serviced. (X-ray protection circuits also may be called "horizontal disable" or "hold-down".)

   Heed the high voltage limits. These include the X–ray Protection Specifications Label, and the Product Safety and X-ray Warning Note on the service data schematic.

1-1 Safety Precautions (Continued)

9. High voltage is maintained within specified limits by close-tolerance, safety-related components and adjustments. If the high voltage exceeds the specified limits, check each of the special components.

10. Design Alteration Warning:
Never alter or add to the mechanical or electrical design of this unit. Example: Do not add auxiliary audio or video connectors. Such alterations might create a safety hazard. Also, any design changes or additions will void the manufacturer's warranty.

11. Hot Chassis Warning:
Some TV receiver chassis are electrically connected directly to one conductor of the AC power cord. If an isolation transformer is not used, these units may be safely serviced only if the AC power plug is inserted so that the chassis is connected to the ground side of the AC source.

    To confirm that the AC power plug is inserted correctly, do the following: Using an AC voltmeter, measure the voltage between the chassis and a known earth ground. If the reading is greater than 1.0V, remove the AC power plug, reverse its polarity and reinsert. Re-measure the voltage between the chassis and ground.

12. Some TV chassis are designed to operate with 85 volts AC between chassis and ground, regardless of the AC plug polarity. These units can be safely serviced only if an isolation transformer inserted between the receiver and the power source.

13. Some TV chassis have a secondary ground system in addition to the main chassis ground. This secondary ground system is not isolated from the AC power line. The two ground systems are electrically separated by insulating material that must not be defeated or altered.

14. Components, parts and wiring that appear to have overheated or that are otherwise damaged should be replaced with parts that meet the original specifications. Always determine the cause of damage or overheating, and correct any potential hazards.

15. Observe the original lead dress, especially near the following areas: Antenna wiring, sharp edges, and especially the AC and high voltage power supplies. Always inspect for pinched, out-of-place, or frayed wiring. Do not change the spacing between components and the printed circuit board. Check the AC power cord for damage. Make sure that leads and components do not touch thermally hot parts.

16. Picture Tube Implosion Warning:
The picture tube in this receiver employs "integral implosion" protection. To ensure continued implosion protection, make sure that the replacement picture tube is the same as the original.

17. Do not remove, install or handle the picture tube without first putting on shatterproof goggles equipped with side shields. Never handle the picture tube by its neck. Some "in-line" picture tubes are equipped with a permanently attached deflection yoke; do not try to remove such "permanently attached" yokes from the picture tube.

18. Product Safety Notice:
Some electrical and mechanical parts have special safety-related characteristics which might not be obvious from visual inspection. These safety features and the protection they give might be lost if the replacement component differs from the original—even if the replacement is rated for higher voltage, wattage, etc.

    Components that are critical for safety are indicated in the circuit diagram by shading, (⚠) or (⚠).
    Use replacement components that have the same ratings, especially for flame resistance and dielectric strength specifications.
    A replacement part that does not have the same safety characteristics as the original might create shock, fire or other hazards.

1-2 Servicing Precautions

Warning1: First read the “Safety Precautions” section of this manual. If some unforeseen circumstance creates a conflict between the servicing and safety precautions, always follow the safety precautions.
Warning2: An electrolytic capacitor installed with the wrong polarity might explode.

1. Servicing precautions are printed on the cabinet. Follow them.

2. Always unplug the unit's AC power cord from the AC power source before attempting to: (a) Remove or reinstall any component or assembly, (b) Disconnect an electrical plug or connector, (c) Connect a test component in parallel with an electrolytic capacitor.

3. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.

4. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the portion around the serviced part has not been damaged.

5. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).

6. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.

7. Never defeat any of the B+ voltage interlocks. Do not apply AC power to the unit (or any of its assemblies) unless all solid-state heat sinks are correctly installed.

8. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Precautions for Electrostatically Sensitive Devices (ESDs)

1. Some semiconductor ("solid state") devices are easily damaged by static electricity. Such components are called Electrostatically Sensitive Devices (ESDs); examples include integrated circuits and some field-effect transistors. The following techniques will reduce the occurrence of component damage caused by static electricity.

2. Immediately before handling any semicon ductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. (Be sure to remove it prior to applying power—this is an electric shock precaution.)

3. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of electrostatic charge.

4. Do not use freon-propelled chemicals. These can generate electrical charges that damage ESDs.

5. Use only a grounded-tip soldering iron when soldering or unsoldering ESDs.

6. Use only an anti-static solder removal device. Many solder removal devices are not rated as "anti-static"; these can accumulate sufficient electrical charge to damage ESDs.

7. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.

8. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

9. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting a foot from a carpeted floor can generate enough static electricity to damage an ESD.

2. Specifications and IC Data

2-1 Specifications

Television System:

MODEL	SYSTEM
CI	PAL-I (UHF)
CII	PAL-I (VHF/UHF)
CX	PAL-B/G, SECAM-B/G
CK	PAL-B/G, D/K, SECAM-B/G, D/K
CW	PAL-B/G, D/K, SECAM-B/G, D/K, NT 4.43
CS	PAL-B/G, D/K, SECAM-B/G, D/K, NT4.43, NT3.58

Channels:

System / Band	PAL/SECAM-B/G,I	PAL, SECAM- D/K	SECAM-K1, PAL-D	NTSC - M
VHF	2 - 12	1 - 13	2 - 9	2 - 13
UHF	21 - 69	21 - 69	13 - 57	14-69

Intermediate Frequencies (MHz) :

SYSTEM / IF Carrier Frequency	PAL/ SECAM- B/G	PAL/SECAM-D/K, SECAM-K1	PAL - I	NTSC - M
Picture IF Carrier	38.90	38.90	38.90	38.90
Sound IF Carrier	33.40	32.40	32.90	34.40
Color Sub Carrier	34.47	34.47	34.47	35.32

Picture Tube:

14 Inch	A34KQV42X	Quick start, in-line-gun, Black stripe, 90°degree deflection
20 Inch	A48KRD82X	
21 Inch	A51KQJ63X	

Power Requirements: AC 100~260V, 50/60Hz

Antenna Input Impedance: VHF, UHF : Telescopic dipole antenna (75 ohm unbalanced type)

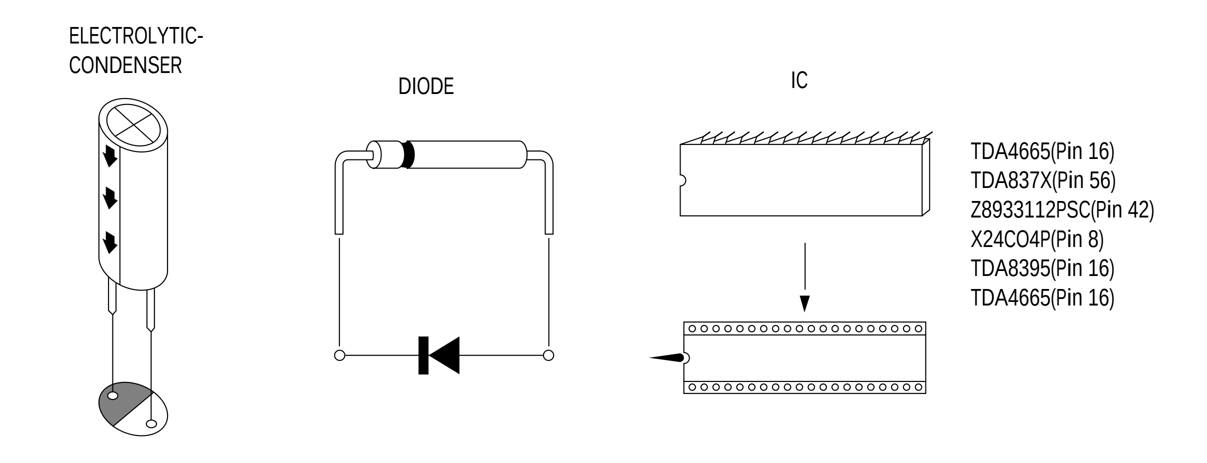
Speaker Impedance: 8 ohm, 5W+5W (Dual Type)
16 ohm, 3W (Monitor Type)

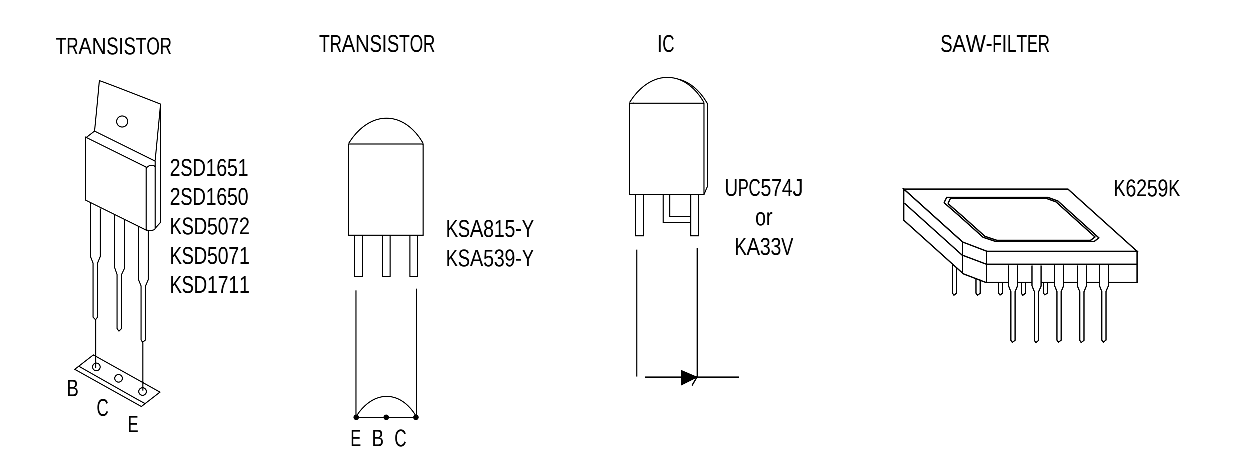
2-2 IC Line Up

Table 2-1 IC Line-Up

Loc. No	Specification	Description	Remark
HC101	PAP102	IF PRE-AMP	
IC201	TDA8374A N3	PAL-B/G, SECAM-B/G, NTSC	Philips
IC202	TDA4665	1H DELAY	SECAM MODULE
IC203	TDA8395P	SECAM DECODER	
IC301	TDA8356	VERTICAL OUTPUT	
IC501	TDA6107Q	RGB DRIVE AMP	
IC601	TDA7056B	SOUND-AMP (3.5W)	Monitor Type
IC602	TDA7057AQ	SOUND-AMP (5W+5W)	Dual Type
IC801	KA3S0680R	POWER IC (STR)	
IC802	KA7630	CUSTOM REGULATOR (5V, 8V)	
IC901	SZM193EA	W/O TTX, English/French/Arabian	Zilog (Non TTX)
	SZM193EV	W/O TTX, English/Vietnames/Indonesian/Maly/Thai	
	SZM193EC	W/O TTX, English/Chinese	
	SZM191EC	W/O TTX, English/Chinese	
	SZM193EE	W/O TTX, English/German/French/Dutch/Italian/Spanish, Swedish/Romanian/Hungarian/Croatian/Polish/Russian, Czech/Bulgarian/Yugo/Greek	
	SZM191ER	W/O TTX, English/Russian (Only for Oceania model)	
	SPM197EE	TTX, West : English/German/French/Dutch/Italian/Spanish/Swedish East : English/Czech/Croatian/Romanian/Hungarian/Polish	Philips (TTX)
	SPM197ER	TTX, English/Russian/Bulgarian	
	SPM197EP	TTX, English/Iranian	
	SPM197EA	TTX, English/French/Arabian	
	SPM197EG	TTX, English/Greek/Yugo	
IC902	24C04	EEPROM	
IC903	KiA7042P	RESET IC ,W/O TTX Model	Zilog
	KiA7442P	TTX Model	Philips
IC401	KA7812	REGULATOR (12V)	
PC801	LTV817B	PHOTO COUPLER	NEC

2-3 Semiconductor Base Diagrams





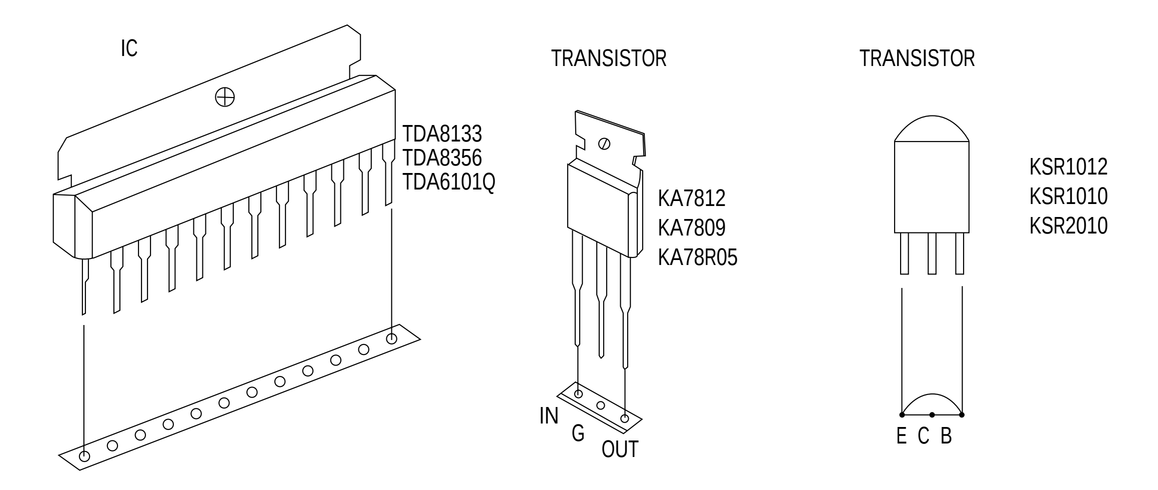
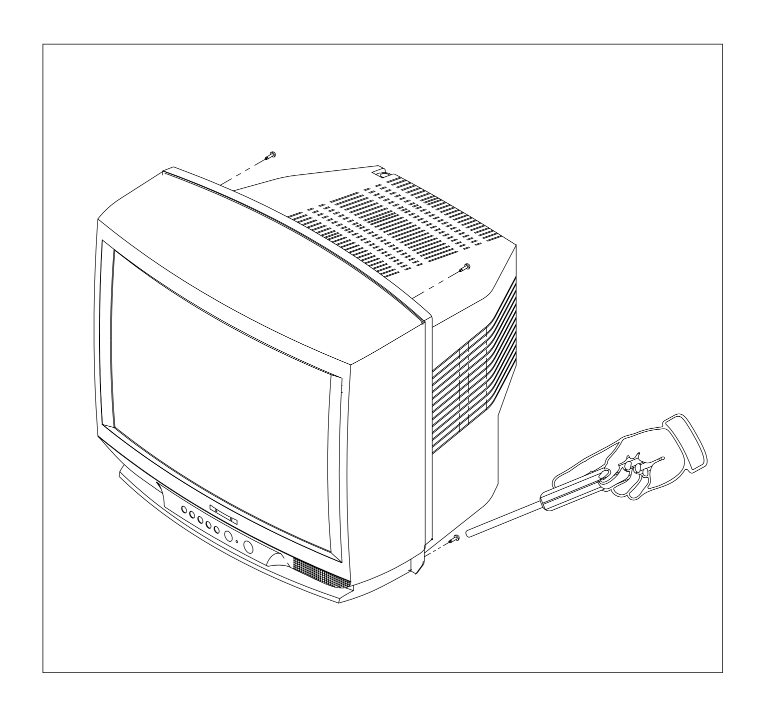


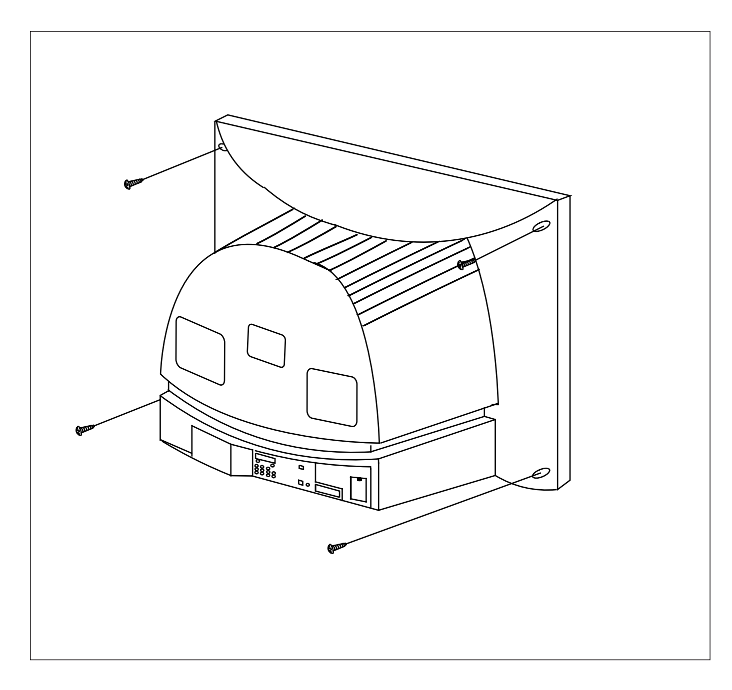
Fig. 2-1 Semiconductor Base Diagrams

MEMO

3. Disassembly and Reassembly

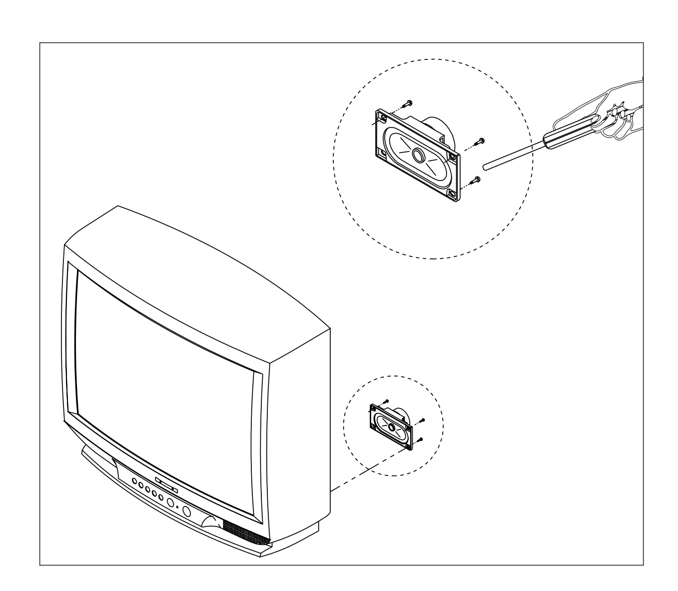
3-1 Back Cover Removal

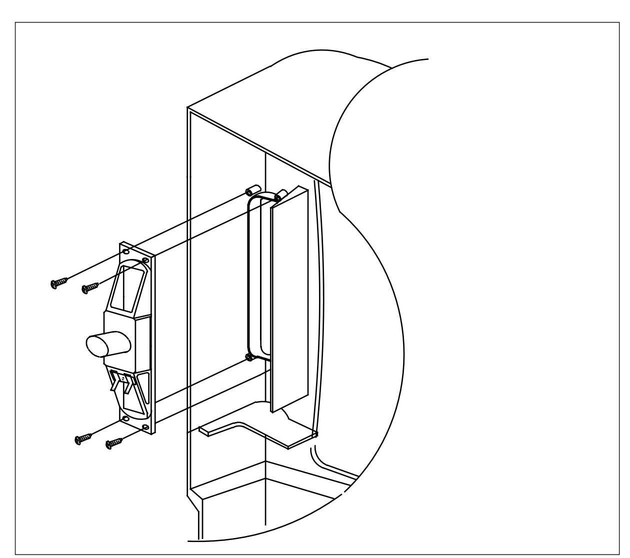


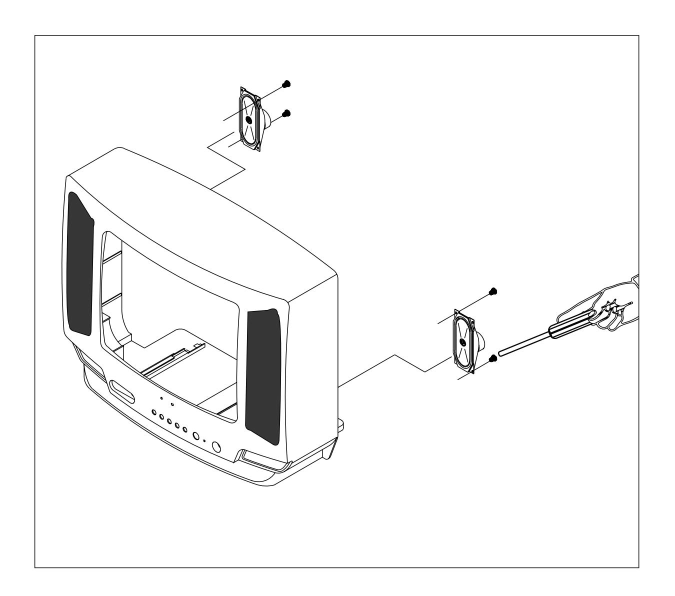


1. After removing the 9 screws, pull the cabinet backwards.

3-2 Speaker Removal

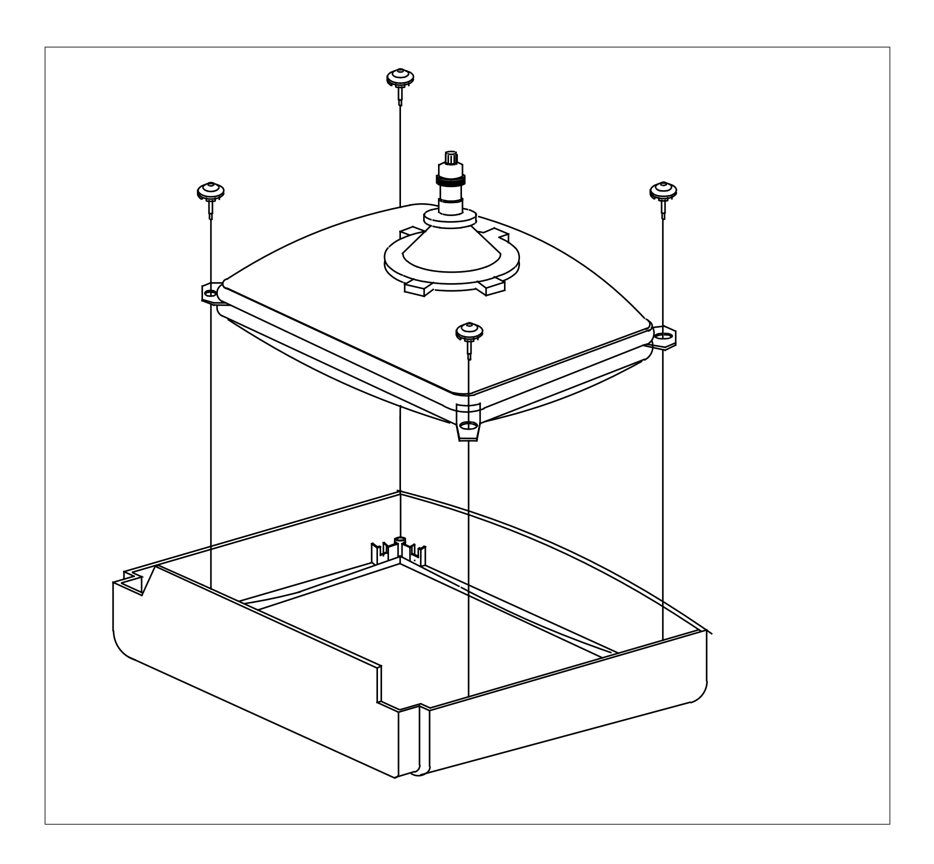






1. Loosen the 4 screws and remove the holder - speakers.

3-3 CRT Removal



1. Spread a soft mat on the floor. Place the TV set face down.

2. Remove the 4 screws mounting the CRT to the front cabinet.

3. Lift the CRT.

MEMO

4. Alignment and Adjustments

4-1 Preadjustment

4-1-1 Factory Mode

1. Do not attempt these adjustments in the Video Mode.

2. The Factory Mode adjustments are necessary when either the EEPROM (IC902) or the CRT is replaced.

3. Do not tamper with the “Adjustment” screen of the Factory Mode menu. This screen is intended only for factory use.

4-1-2 When EEPROM (IC902) Is Replaced

1. When IC902 is replaced all adjustment data revert to initial values. It is necessary to re-program this data.

2. After IC902 is replaced, warm up the TV for 10 seconds.

4-1-3 When CRT Is Replaced

1. Make the following adjustments AFTER setting up after setting up purity and convergence :

   White Balance
   Sub-Brightness
   Vertical Center
   Vertical Size
   Horizontal Size
   Fail Safe (This adjustment must be the last step).

2. If the EEPROM or CRT is replaced, set SC and PVA to 10 and 45 (Factory mode).

   SC : 14, 16 Inch : 0
   20, 21 Inch : 10

4-2 Factory/Service Mode

4-2-1 Procedure for the “Adjustment” Mode

1. This mode uses the standard remote control. The Service Mode is activated by entering the following remote-control sequence :

   (1) SLEEP→FACTORY.

   (2) STAND-BY→P.STD→HELP→SLEEP →POWER ON.

2. The “SERVICE (FACTORY)” message will be displayed. The Service Mode has four components: Adjustment, Test Pattern, Option Bytes and Reset.

3. Access the Adjustment Mode by pressing the “VOLUME” keys (Up or Down).
   The adjustment parameters are listed in the accompanying table, and selected by pressing the CHANNEL keys (▲ ,▼).

4. Selection sequences for the PAL system:

   DOWN or UP key:
   AGC>VCO>SBT>SCT>SCR>SC>RG>
   GG>BG>CDL>BLU>PSL>PVS>PVA>PHS

5. Selection sequences for the NTSC system:

   DOWN or UP key:
   AGC>VCO>SBT>SCT>SCR>SC>RG>
   GG>BG>CDL>BLU>NSL>NVS>NVA>NHS

6. The VOLUME keys increase or decrease the adjustment values, (stored in the non-volatile memory when Adjustment Mode is cancelled).

7. Cancel the Adjustment Mode by re-pressing the “FACTORY” or Power OFF.

4-2-2 Main Adjustment Parameter

Table 4-1 Main Adjustment Parameter (Zilog, Phlips μ-com)

FUNCTION	OSD ABBREVIATION	RANGE	INITIAL DATA	REMARKS
AUTO GAIN CONTROL	AGC	0 ~ 63 STEP	32	TDA8374
SUB BRIGHT	SBT	0 ~ 23 STEP	7	
SUB CONTRAST	SCT	0 ~ 23 STEP	7	
SUB COLOR	SCR	0 ~ 23 STEP	13	
RED DRIVE GAIN	RG	0 ~ 63 STEP	32	
GREEN DRIVE GAIN	GG	0 ~ 63 STEP	32	
BLUE DRIVE GAIN	BG	0 ~ 63 STEP	32	
PAL VERTICAL SLOPE	PSL	0 ~ 63 STEP	20	
PAL VERTICAL SHIFT	PVS	0 ~ 63 STEP	32	
PAL VERTICAL AMPLITUDE	PVA	0 ~ 63 STEP	45	
PAL HORIZONTAL SHIFT	PHS	0 ~ 63 STEP	32	
NTSC VERTICAL SLOPE	NSL	0 ~ 63 STEP	20	
NTSC VERTICAL SHIFT	NVS	0 ~ 63 STEP	32	
NTSC VERTICAL AMPLITUDE	NVA	0 ~ 63 STEP	45	
NTSC HORIZONTAL SHIFT	NHS	0 ~ 63 STEP	32	
VOLTAGE CONTROL OSCILLATOR	VCO	0 ~ 128 STEP	64	
S-CORRECTION	SC	0 ~ 63 STEP	32	
TTX SUB-CONTRAST	TSS	0 ~ 63 STEP	16	
CATHODE DRIVE LEVEL	CDL	0 ~ 7 STEP	3	TDA8842
BLUE STRETCH MODE	BLU	0 ~ 3 STEP	2	

NOTE : PVS,PVA, PHS, NVS, NVA,NHS parameters must be aligned using both the 50Hz and 60Hz vertical-field rates.

4-2-3 Test Pattern (Aging Mode)

1. This mode can be used during servicing, or for confirming that the convergence and purity adjustments are correct.

2. Access the Test Pattern parameters by pressing a CHANNEL keys (▲ ,▼) while the Service Mode is on. The cursor will move to the test pattern. Press the VOLUME keys. On-screen display:

   - RED
   - GREEN
   - BLUE

   NON -TTX MICOM ONLY

   - AGING

   TTX MICOM

3. AGING Mode (Reference Only)

   This pattern is used for pre-heating the CRT during manufacturing—it is accessed in the factory by twice pressing the “SLEEP → FACTORY→FACTORY “ key, then white pattern will be displayed.

   Even if the TV power is cut off, the Aging Mode is not cancelled, The aging mode is cancelled by repressing the “FACTORY” key or pressing the local “CH UP / DOWN” key.

   The patterns are displayed at 5 sec intervals : NON-TTX Micom only.

4-2-4 Option Bytes

In the Service Mode, various can be selected via the Option Bytes (8 bits each). Example:

SYSTEM OSD DISPLAY

	BIT 6	BIT 5	BIT 4	BIT 3	BIT 2	BIT 1	BIT 0
BYTE 0 : 8 -			L (BIT : 0)	H (BIT : 8)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)
BYTE 1 : 0 -	L (BIT :0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)	L (BIT : 0)

TDA8374, CK SYSTEM, RCA JACK SYSTEM OSD DISPLAY

BYTE 0 : 11	L (BIT : 1)	H (BIT : 0)	L (BIT : 0)	H (BIT : 0)	L (BIT : 1)

4-2-4 (A) OPTION BYTE TABLE

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="7">BYTE 0</td><td>D7</td><td>-</td><td></td><td>-</td></tr>
<tr><td>D6</td><td>16:9 not functional during “Zoom” in the A/V Mode</td><td>16:9 functional during “Zoom” in the A/V Mode</td><td></td></tr>
<tr><td>D5</td><td>No Child Lock</td><td>Child Lock</td><td></td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td></td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td></td></tr>
<tr><td>D2
D1</td><td colspan="2">
<table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : PAL ONLY (NO OSD)</td><td>B/G→D/K → I</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>B/G→D/K →I→
NT →M</td></tr>
</table>
</td><td></td></tr>
<tr><td>D0</td><td>TDA8374</td><td>TDA8842</td><td>Onechip</td></tr>
<tr><td rowspan="6">BYTE 1</td><td>D7
D6</td><td colspan="3">
<table>
<tr><th>D7</th><th>D6</th><th>Southeast/Middle East Asia /Africa</th><th>Vietnam/India</th><th>Thailand/Malaysia</th><th>CIS</th><th>China</th></tr>
<tr><td>0</td><td>0</td><td>English Only</td><td>English Only</td><td>English Only</td><td>English Only</td><td>English only</td></tr>
<tr><td>0</td><td>1</td><td>English/Arabian</td><td>English/Vietnamese</td><td>English/Thai</td><td>English/CIS</td><td>English /Chinese</td></tr>
<tr><td>1</td><td>0</td><td>English/Arabian/French</td><td>English/Indonesian</td><td>English/Malay</td><td></td><td></td></tr>
<tr><td>1</td><td>1</td><td>English Only</td><td>English/Vietnamese /Indonesian</td><td>English/Thai /Malay</td><td></td><td></td></tr>
</table>
</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF (after fine tuning)</td><td></td></tr>
<tr><td>D4</td><td>Existing sharpness level</td><td>Sharpness level Up</td><td>March 12, 1997</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power ON</td><td>Last State Memory</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz (NTSC Table)
PAL : 50KHz (PAL Table)</td><td>NTSC : 25KHz (NTSC Table)
PAL : 50KHZ (PAL Table)</td><td>PAL Table always used in the A/V Mode (March 12, 1997)</td></tr>
<tr><td>D1
D0</td><td colspan="2">
<table>
<tr><th>D1</th><th>D0</th><th>System</th></tr>
<tr><td>0</td><td>0</td><td>DIG</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>NT-M</td></tr>
</table>
</td><td>Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)</td></tr>
</table>

4-2-4 (B) TTX MICOM (SPM-197EE/ER/EG) OPTION TABLE (FOR EUROPE)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td>3 BAND</td><td>UHF ONLY</td><td>ALL</td></tr>
<tr><td>D6</td><td>16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)</td><td>16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)</td><td>ALL (BASIC : LOW)</td></tr>
<tr><td>D5</td><td>LED RED AT STAND-BY</td><td>LED GREEN AT STAND-BY (POLAND)</td><td>ALL (J900 DELETE AT H)</td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td>ALL</td></tr>
<tr><td>D3</td><td>P-STD MAX</td><td>P-STD NORMAL</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2"><table>
<tr><th>D2</th><th>D1</th><th>SOUND SYSTEM</th><th>COLOR SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G ↔ D/K : CK MODEL</td><td rowspan="4">AUTO (NO OSD)</td></tr>
<tr><td>0</td><td>1</td><td>I ONLY (NO OSD) : CI, CII MODEL</td></tr>
<tr><td>1</td><td>0</td><td>B/G ONLY (NO OSD) : CB, CX MODEL</td></tr>
<tr><td>1</td><td>1</td><td>NOT USED</td></tr>
</table></td><td rowspan="2">ALL</td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>ALL</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="2">NOT USED</td><td rowspan="2">ALL (FIX : LOW)</td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td><td>Western OSD
:English/German/French/Dutch/ Italian/Spanish/Swedish</td><td>Eastern OSD
:English/Croatian/Rumanian/ Hungarian/Hungarian/Polish/Czech</td><td>SPM- 197EE ONLY used
* SPM-197ER : English/Russian/ Bulgarian
*SPM-197EG: English/Greek/ Yugosiavian</td></tr>
<tr><td>D4</td><td>Existing sharpness level
(when using TDA6108 RGB AMP)</td><td>Sharpness level up
(when using TDA6107Q AMP)</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 50KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (PAL TABLE)</td><td>ALL (RF VOL. CURVE)
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2">NOT USED (FIX : LOW)</td><td rowspan="2">Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note : Available when the sound is B/G ↔ D/K in the Byte 0</td></tr>
<tr><td>D0</td><td>B/G SOUND</td><td>D/K SOUND</td></tr>
</table>

- P-STD Classification (CON./BRI./SHRP.COL.)

D3 BIT	STANDARD MODE	DYAMIC MODE	MOVIE MODE	MILD MODE	CUSTOM MODE
0	100/50/50/50	100/50/75/50	90/50/75/50	60/50/75/50	100/50/50/50
1	90/50/50/50	100/50/50/50	75/55/50/50	60/50/50/50	90/55/25/50

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal) 3. No BLUE SCREEN 4. NO TIMER (CLOCK ON/OFF)

4-2-4 (C) TTX MICOM (SPM-197EP/EPR/EA) OPTION TABLE (FOR MIDDLE EAST)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td colspan="2">NOT USED</td><td>ALL (FIX : LOW)</td></tr>
<tr><td>D6</td><td>16:9 not functional during zoom (NORMAL-ZOOM)</td><td>16:9 functional during zoom (NORMAL-ZOOM-16:9)</td><td>EP is an OPTION during A/V (BASIC : LOW)</td></tr>
<tr><td>D5</td><td colspan="2">NOT USED</td><td>ALL (FIX : LOW)</td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td>ALL</td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td>ALL</td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2"><table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>(?)→B/G→D/K →</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY (No OSD)
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→
NT → M →</td></tr>
</table></td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>EP VERSION : TDA8374A ONLY</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="3">NOT USED</td><td rowspan="3">ALL (FIX : LOW)</td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td></tr>
<tr><td>D4</td><td>Existing Sharpness level (when using the TDA6108 RGB AMP)</td><td>Sharpness level up (when using the TDA6107Q RGB AMP)</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 50KHz (PAL TABLE</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (PAL TABLE</td><td>ALL (RF VOL. CURVE)
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2"><table>
<tr><th>D1</th><th>D0</th><th>SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>?(B/G & D/K OR M) /EP VER. : M</td></tr>
</table></td><td rowspan="2">Sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note : A single sound in the Byte 0 is unavailable</td></tr>
<tr><td>D0</td></tr>
</table>

● OSD Language by MiCOM

1. Persian (for Iran) : English/Persian (Iranian)
2. Arab (Middle East, Africa) : English/French/Arabian

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal) 3. No BLUE SCREEN 4. No TIMER (CLOCK ON/OFF)

4-2-4 (D) TTX MICOM (SPM-193EE/EER) OPTION TABLE (FOR EUROPE)

BYTE	BIT	LOW (0)	HIGH (1)	REMARK
BYTE 0	D7	3 BAND	UHF ONLY	SZM-193EE : H NOT functional SZM-193EER :
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)	16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)	Basic Specification : LOW
	D5	LED RED AT STAND-BY	LED GREEN AT STAND-BY	POLAND (J900 DELETE AT H)
	D4	CH Up/down functional in the A/V mode (SCART Jack)	CH Up/down not functional in the A/V mode (RCA Jack)	BASIC : LOW
	D3	P-STD MAX	P-STD NORMAL	ALL (BASIC : HIGH)
	D2, D1	(see table below)		SOUND SYSTEM OPTION
	D0	TDA8374A	TDA8842	IC201 (ONE-CHIP) OPTION
BYTE 1	D7, D6	(see table below)		Language Option
	D5	AFT ON (always)	AFT OFF (after fine tuning)	BASIC : LOW
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)	Sharpness level up (when using TDA6107Q AMP)	BASIC : HIGH
	D3	No Auto Power On	Auto Power On	BASIC: HIGH
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)	NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (NTSC TABLE)	RF VOL. : CURVE, BASIC : LOW (AV VOL. CURVE:PAL CURVE)
	D1	NOT USED (FIX : LOW)		Sound system during the Auto search (All should be set for the system which is selected during the Factory Reset.) Note: Only available during the specification of CK model in the Byte 0
	D0	SOUND B/G	SOUND D/K	

Byte 0, D2/D1:

D2	D1	SOUND SYSTEM	COLOR SYSTEM
0	0	B/G ↔ D/K : CK MODEL	AUTO (NO OSD)
0	1	I ONLY (NO OSD) : CI, CII MODEL	
1	0	B/G ONLY (NO OSD) : CB, CX MODEL	
1	1	NOT USED	

Byte 1, D7/D6:

D7	D6	OSD Language
0	0	English/German/French/Dutch/Italian/Spanish/Swedish
0	1	
1	0	English/Romanian/Hungarian/Croatian/Polish/Czech/Russian
1	1	English/Bulgarian/Greek/Yugo

● P-STD Classification (CON./BRI./SHRP./COL.)

D3 BIT	STANDARD MODE	DYAMIC MODE	MOVIE MODE	MILD MODE	CUSTOM MODE
0	100/50/50/50	100/50/75/50	90/50/75/50	60/50/75/50	100/50/50/50
1	90/50/50/50	100/50/50/50	75/55/50/50	60/50/50/50	90/55/25/50

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. No BLUE SCREEN during no RF signal (Blue screen during A/V 4. NO TIMER

4-2-4 (E) TTX MICOM (SZM-193EA/EAR/EV) OPTION TABLE

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td>LINE STEREO OFF</td><td>LINE STEREO ON</td><td>ALL</td></tr>
<tr><td>D6</td><td>16:9 not function during zoom in the A/V mode (Normal-ZOOM)</td><td>16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)</td><td>BASIC : LOW</td></tr>
<tr><td>D5</td><td>CHILD LOCK OFF</td><td>CHILD LOCK ON</td><td>ALL (No SZM193EA)</td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td>ALL</td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td>ALL</td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2"><table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>B/G→D/K</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I→
NT → M →</td></tr>
</table></td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>ALL (No SZM193EA)</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="2"><table>
<tr><th>D7</th><th>D6</th><th>Middle East/Africa Version</th><th>Asia Version (SZM193EV)</th></tr>
<tr><td>0</td><td>0</td><td>English ONLY</td><td>English only</td></tr>
<tr><td>0</td><td>1</td><td>English/Arabian</td><td>English/Indonesian/Malay/Thai/Vietnamese</td></tr>
<tr><td>1</td><td>0</td><td>English/Arabian/French</td><td>English/Vietnamese/Indonesian</td></tr>
<tr><td>1</td><td>1</td><td>English ONLY</td><td>English/Thai/Malay</td></tr>
</table></td><td rowspan="2"></td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF after fine tuning (for India)</td><td>ALL (No SZM-193EA)</td></tr>
<tr><td>D4</td><td>Existing Sharpness level
(when using TDA6108 RGB AMP)</td><td>Sharpness level up
(when using TDA6107Q RGB AMP)</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>ALL (BASIC : HIGH)</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz(NTSC TABLE)
PAL : 50 KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (NTSC TABLE)</td><td>ALL (RF VOL.: HIGH)
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2"><table>
<tr><th>D1</th><th>D0</th><th>SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>NT-M</td></tr>
</table></td><td rowspan="2">Initial sound system during the auto search (All should be for the system which is selected during the Factory Reset.)
Note : Unavailable during the CB model in the byte 0</td></tr>
<tr><td>D0</td></tr>
</table>

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. No BLUE SCREEN 4. TIMER (CLOCK ON/OFF)

4-2-4 (F) TTX MICOM (SZM-191ER) OPTION TABLE (FOR RUSSIA, OCEANIA)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td colspan="2">NOT USED</td><td>FIX : LOW</td></tr>
<tr><td>D6</td><td>16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)</td><td>16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)</td><td>BASIC : LOW</td></tr>
<tr><td>D5</td><td colspan="2">NOT USED</td><td>FIX : LOW</td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td></td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td>BASIC : LOW</td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2"><table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>B/G→D/K</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY (No OSD)
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G OSD</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I→
NT → M</td></tr>
</table></td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>IC201(ONE-CHIP) OPTION</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2">NOT USED</td><td>FIX : LOW</td></tr>
<tr><td>D6</td><td>English ONLY</td><td>English/Russian</td><td>Language option</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF (after fine tuning)</td><td>BASIC : LOW</td></tr>
<tr><td>D4</td><td>Existing Sharpness level (when using TDA6108 RGB AMP)</td><td>Sharpness level up (when using the TDA6107Q RGB AMP)</td><td>BASIC : HIGH</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>BASIC : HIGH</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 50KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (PAL TABLE)</td><td>ALL (RF VOL. CURVE) , BASIC :LOW
(AV VOL. CURVE: PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2"><table>
<tr><th>D1</th><th>D0</th><th>System</th></tr>
<tr><td>0</td><td>0</td><td>DIG</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>NT-M</td></tr>
</table></td><td rowspan="2">Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note : Unavailable during the CB model in the Byte 0</td></tr>
<tr><td>D0</td></tr>
</table>

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal   2. AUDIO MUTE during no signal
  3. BLUE SCREEN ON/OFF   4. No TIMER CLOCK

- The SZM191ER is to be diverted to Australia/New Zealand because of the non-functionality of RGB (of pin 21). (OPTION BYTE : 55/1C)→ When using TDA8842 N1, the BLOOMING check is required.

4-2-4 (G) TTX MICOM (SZM-193EVR) OPTION TABLE (FOR ASIA)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td>LINE STEREO OFF</td><td>LINE STEREO ON</td><td></td></tr>
<tr><td>D6</td><td>16:9 not function during zoom in the A/V mode (Normal-ZOOM)</td><td>16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)</td><td>BASIC : LOW</td></tr>
<tr><td>D5</td><td>CHILD LOCK OFF</td><td>CHILD LOCK ON</td><td></td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td>BASIC : HIGH</td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td></td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2"><table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>B/G→D/K</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>B/G→D/K → I→
NT → M →</td></tr>
</table></td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>IC201 (ONE-CHIP) OPTION</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="2"><table>
<tr><th>D7</th><th>D6</th><th>OSD Language</th></tr>
<tr><td>0</td><td>0</td><td>English ONLY</td></tr>
<tr><td>0</td><td>1</td><td>English/Indonesian/Malay/Thai/Vietnamese</td></tr>
<tr><td>1</td><td>0</td><td>English/Vietnamese/Indonesian</td></tr>
<tr><td>1</td><td>1</td><td>English/Thai/Malay</td></tr>
</table></td><td rowspan="2">Language option</td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF (after fine tuning)</td><td>BASIC : LOW(India : HIGH)</td></tr>
<tr><td>D4</td><td>CLOCK DISPLAY OFF</td><td>CLOCK DISPLAY ON</td><td>BASIC : LOW
Indonesia : HIGH</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>BASIC : HIGH</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz(NTSC TABLE)
PAL : 50 KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (NTSC TABLE)</td><td>ALL (RF VOL.: HIGH)
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2"><table>
<tr><th>D1</th><th>D0</th><th>SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>NT-M</td></tr>
</table></td><td rowspan="2">Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note : Unavailable during the CB model in the Byte 0</td></tr>
<tr><td>D0</td></tr>
</table>

- Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE during no signal 3. BLUE SCREEN On/off 4. TIMER CLOCK ON/OFF

4-2-4 (H) NON TTX MICOM (SZM-193EV2) OPTION TABLE (FOR ASIA)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td>LINE STEREO OFF</td><td>LINE STEREO ON</td><td></td></tr>
<tr><td>D6</td><td>16:9 not function during zoom (Normal-ZOOM)</td><td>16:9 functional during zoom (NORMAL-ZOOM-16:9)</td><td>BASIC : LOW</td></tr>
<tr><td>D5</td><td>CHILD LOCK OFF</td><td>CHILD LOCK ON</td><td></td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td>BASIC : HIGH</td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td></td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2">
<table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>(?)→B/G→D/K →</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY (No OSD)
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→
NT → M →</td></tr>
</table>
</td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>IC201 (ONE-CHIP) OPTION</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="2">
<table>
<tr><th>D7</th><th>D6</th><th>OSD Language</th></tr>
<tr><td>0</td><td>0</td><td>English ONLY</td></tr>
<tr><td>0</td><td>1</td><td>English/Indonesian/Malay/Thai/Vietnamese</td></tr>
<tr><td>1</td><td>0</td><td>English/Vietnamese/Indonesian</td></tr>
<tr><td>1</td><td>1</td><td>English/Thai/Malay</td></tr>
</table>
</td><td rowspan="2">Language option</td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF (after fine tuning)</td><td>BASIC : LOW(India : HIGH)</td></tr>
<tr><td>D4</td><td>CLOCK DISPLAY OFF</td><td>CLOCK DISPLAY ON</td><td>BASIC : LOW
Indonesia : HIGH</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>BASIC : HIGH</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz(NTSC TABLE)
PAL : 50 KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (NTSC TABLE)</td><td>RF VOL.CURVE
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2">
<table>
<tr><th>D1</th><th>D0</th><th>SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>?) B/G & D/K OR M</td></tr>
</table>
</td><td rowspan="2">Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note: Unavailable during the CB model in the Byte 0</td></tr>
<tr><td>D0</td></tr>
</table>

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE during no signal 3. BLUE SCREEN On/off 4. TIMER Clock On/Off

4-2-4 (I) TTX MICOM (SPM-193EA2) OPTION TABLE (FOR MIDDLE EAST ASIA/AFRICA)

<table>
<tr><th>BYTE</th><th>BIT</th><th>LOW (0)</th><th>HIGH (1)</th><th>Application MICOM</th></tr>
<tr><td rowspan="8">BYTE 0</td><td>D7</td><td>LINE STEREO OFF</td><td>LINE STEREO ON</td><td></td></tr>
<tr><td>D6</td><td>16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)</td><td>16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)</td><td>BASIC : LOW</td></tr>
<tr><td>D5</td><td>CHILD LOCK OFF</td><td>CHILD LOCK ON</td><td></td></tr>
<tr><td>D4</td><td>CH Up/down functional in the A/V mode (SCART Jack)</td><td>CH Up/down not functional in the A/V mode (RCA Jack)</td><td></td></tr>
<tr><td>D3</td><td>SOUND-I SYSTEM USED</td><td>SOUND-I SYSTEM NOT USED</td><td></td></tr>
<tr><td>D2</td><td colspan="2" rowspan="2">
<table>
<tr><th>D2</th><th>D1</th><th>COLOR SYSTEM</th><th>SOUND SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>CK : AUTO (No OSD)</td><td>(?)→B/G→D/K →</td></tr>
<tr><td>0</td><td>1</td><td>CW : -. RF : AUTO→PAL →SECAM→NT4.43
-. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→</td></tr>
<tr><td>1</td><td>0</td><td>CB : -RF : PAL ONLY (No OSD)
-A/V : AUTO→PAL →NT4.43→NT3.58</td><td>B/G ONLY (No OSD)</td></tr>
<tr><td>1</td><td>1</td><td>CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58
-A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58</td><td>(?)→B/G→D/K → I→
NT → M →</td></tr>
</table>
</td><td rowspan="2"></td></tr>
<tr><td>D1</td></tr>
<tr><td>D0</td><td>TDA8374A</td><td>TDA8842</td><td>IC201 (ONE-CHIP) OPTION</td></tr>
<tr><td rowspan="8">BYTE 1</td><td>D7</td><td colspan="2" rowspan="2">NOT USED</td><td rowspan="2">FIX : LOW</td></tr>
<tr><td>D6</td></tr>
<tr><td>D5</td><td>AFT ON (always)</td><td>AFT OFF (after fine tuning)</td><td>BASIC : LOW</td></tr>
<tr><td>D4</td><td>Existing Sharpness level (when using the TDA6108 RGB AMP)</td><td>Sharpness level up (when using the TDA6107Q RGB AMP)</td><td>BASIC : HIGH</td></tr>
<tr><td>D3</td><td>No Auto Power On</td><td>Auto Power On</td><td>BASIC : HIGH</td></tr>
<tr><td>D2</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 50KHz (PAL TABLE)</td><td>NTSC : 25KHz (NTSC TABLE)
PAL : 27KHz (PAL TABLE)</td><td>ALL (RF VOL. CURVE)
BASIC : LOW
(AV VOL. CURVE : PAL CURVE)</td></tr>
<tr><td>D1</td><td colspan="2" rowspan="2">
<table>
<tr><th>D1</th><th>D0</th><th>SYSTEM</th></tr>
<tr><td>0</td><td>0</td><td>B/G</td></tr>
<tr><td>0</td><td>1</td><td>D/K</td></tr>
<tr><td>1</td><td>0</td><td>I</td></tr>
<tr><td>1</td><td>1</td><td>? B/G & D/K OR M</td></tr>
</table>
</td><td rowspan="2">Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.)
Note : Unavailable during the CB model in the Byte 0</td></tr>
<tr><td>D0</td></tr>
</table>

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE (during no signal)
3. BLUE SCREEN On/Off 4. No Timer Clock On/Off

4-2-4 (J) TTX MICOM (SZM-193EC) OPTION TABLE (FOR CHINA)

BYTE	BIT	LOW (0)	HIGH (1)	Remark
BYTE 0	D7	LINE STEREO OFF	LINE STEREO ON	BASIC : LOW
	D6	16:9 not functional during zoom in the A/V mode (NORMAL-ZOOM)	16:9 functional during zoom in the A/V mode (NORMAL-ZOOM-16:9)	BASIC : LOW
	D5	CHILD LOCK OFF	CHILD LOCK ON	
	D4	CH Up/down functional in the A/V mode (SCART Jack)	CH Up/down not functional in the A/V mode (RCA Jack)	BASIC : LOW
	D3	SOUND-I SYSTEM USED	SOUND-I SYSTEM NOT USED	BASIC : HIGH
	D2 D1	(see sub-table below)		
	D0	TDA8374A	TDA8842	IC201(ONE-CHIP) OPTION
BYTE 1	D7	NOT USED		FIX : LOW
	D6	English ONLY	English/Russian	Language option
	D5	AFT ON (always)	AFT OFF (after fine tuning)	BASIC : LOW
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)	Sharpness level up (when using the TDA6107Q RGB AMP)	BASIC : HIGH
	D3	No Auto Power On	Auto Power On	BASIC : HIGH
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)	NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)	ALL (RF VOL. CURVE) , BASIC:LOW (AV VOL. CURVE: PAL CURVE)
	D1 D0	(see sub-table below)		Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CD model in the Byte 0

Byte 0, D2/D1:

D2	D1	COLOR SYSTEM	SOUND SYSTEM
0	0	CK : AUTO (No OSD)	B/G→D/K
0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58	B/G→D/K → I
1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58	B/G OSD
1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58	B/G→D/K → I→ NT → M

Byte 1, D1/D0:

D1	D0	System
0	0	DIG
0	1	D/K
1	0	I
1	1	NT-M

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE during no signal
3. BLUE SCREEN On/Off 4. TIMER CLOCK On/Off

4-2-4 (K) NON TTX MICOM (SZM-191EC) OPTION TABLE (FOR CHINA)

BYTE	BIT	LOW (0)	HIGH (1)	Application MICOM
BYTE 0	D7	NOT USED		FIX : LOW
	D6	16:9 not functional during zoom (NORMAL-ZOOM)	16:9 functional during zoom (NORMAL-ZOOM-16:9)	BASIC : LOW
	D5	NOT USED		FIX : LOW
	D4	CH Up/down functional in the A/V mode (SCART Jack)	CH Up/down not functional in the A/V mode (RCA Jack)	
	D3	SOUND-I SYSTEM USED	SOUND-I SYSTEM NOT USED	BASIC : LOW
	D2, D1	(see table below)		
	D0	TDA8374A	TDA8842	IC201(ONE-CHIP) OPTION

D2	D1	COLOR SYSTEM	SOUND SYSTEM
0	0	CK : AUTO (No OSD)	B/G→D/K
0	1	CW : -. RF : AUTO→PAL →SECAM→NT4.43 -. A/V : AUTO→PAL→SECAM →NT4.43 →NT3.58	B/G→D/K → I
1	0	CB : -RF : PAL ONLY (No OSD) -A/V : AUTO→PAL →NT4.43→NT3.58	B/G OSD
1	1	CS : - RF : AUTO→PAL →SECAM →NT4.43→NT 3.58 -A/V : AUTO→PAL →SECAM →NT4.43 →NT3.58	B/G→D/K → I→ NT → M

BYTE	BIT	LOW (0)	HIGH (1)	Application MICOM
BYTE 1	D7	NOT USED		FIX : LOW
	D6	English ONLY	English/Russian	Language option
	D5	AFT ON (always)	AFT OFF (after fine tuning)	BASIC : LOW
	D4	Existing Sharpness level (when using TDA6108 RGB AMP)	Sharpness level up (when using the TDA6107Q RGB AMP)	BASIC : HIGH
	D3	No Auto Power On	Auto Power On	BASIC : HIGH
	D2	NTSC : 25KHz (NTSC TABLE) PAL : 50KHz (PAL TABLE)	NTSC : 25KHz (NTSC TABLE) PAL : 27KHz (PAL TABLE)	ALL (RF VOL. CURVE) , BASIC :LOW (AV VOL. CURVE: PAL CURVE)
	D1, D0	(see table below)		Initial sound system during the auto search (All should be set for the system which is selected during the Factory Reset.) Note : Unavailable during the CD model in the Byte 0

D1	D0	System
0	0	DIG
0	1	D/K
1	0	I
1	1	NT-M

● Function Required : 1. PICTURE OFF (after 15 minutes) during no signal 2. AUDIO MUTE during no signal 3. BLUE SCREEN ON/OFF 4. No TIMER CLOCK

4-2-5 RESET

The Reset Mode is used during factory inspection.
Function Reset:

1.	Channels	Add/Erase
2.	Sort	Non
3.	System	Auto
4.	Timer	off
5.	Blue Screen	off
6.	Child Lock	off
7.	Picture	standard
8.	Volume	26
9.	CH. Skip	Erased

4-3 Other Adjustments

4-3-1 General

1. Usually, a color TV needs only slight touch-up adjustment upon installation. Check the basic characteristics such as height, horizontal and vertical sync and focus.

2. The picture should have good black and white details. There should be no objectionable color shading; if color shading is present, perform the purity and convergence adjustments described below.

3. Use the specified test equipment or its equivalent.

4. Correct impedance matching is essential.

5. Avoid overload. Excessive signal from a sweep generator might overload the front-end of the TV. When inserting signal markers, do not allow the marker generator to distort test results.

6. Connect the TV only to an AC power source with voltage and frequency as specified on the backcover nameplate.

7. Do not attempt to connect or disconnect any wires while the TV is turned on. Make sure that the power cord is disconnected before replacing any parts.

8. To protect against shock hazard, use an isolation transformer.

4-3-2 Automatic Degaussing

A degaussing coil is mounted around the picture tube, so that external degaussing after moving the TV should be unnecessary. But the receiver must be properly degaussed upon installation.

The degaussing coil operates for about 1 second after the power is switched ON. If the set has been moved or turned in a different direction, disconnect its AC power for at least 10 minutes.

If the chassis or parts of the cabinet become magnetized, poor color purity will result. If this happens, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube and the sides and front of the receiver. Slowly withdraw the coil to a distance of about 6 feet before removing power.

4-3-3 High Voltage Check

CAUTION: There is no high voltage adjustment on this chassis. The B+ power supply must be set to +125 volts (Full color bar input and normal picture level).

1. Connect a digital voltmeter to the second anode of the picture tube.

2. Turn on the TV. Set the Brightness and Contrast controls to minimum (zero beam current).

3. The high voltage should not exceed 27.5KV.

4. Adjust the Brightness and contrast controls to both extremes. Ensure that the high voltage does not exceed 27.5KV under any conditions.

4-3-4 FOCUS Adjustment

1. Input a black and white signal.

2. Adjust the tuning control for the clearest picture.

3. Adjust the FOCUS control for well defined scanning lines in the center area of the screen.

4-3-5 Cathode Voltage Adjustment (Screen Adjustment)

1. Connect CRT socket pin GK to an oscilloscope probe.

2. Input a gray scale pattern. (Use a pattern generator, PM5518)

3. Use the P mode key (on the remote control) for the STANDARD picture.

4. Adjust the Screen VR (on the FBT) so that the voltage on the oscilloscope becomes 130±2.5V (See Fig. 4-1).

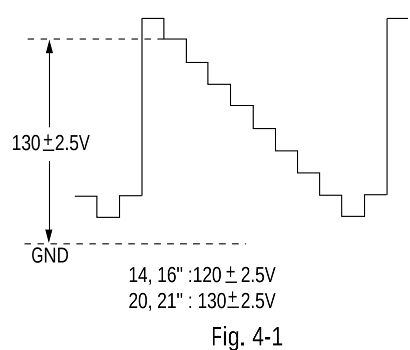


Fig. 4-1

4-3-6 Purity Adjustment

1. Warm up the receiver for at least 20 minutes.

2. Plug in the CRT deflection yoke and tighten the clamp screw.

3. Plug the convergence yoke into the CRT and set in as shown in Fig. 4-2.

4. Input a black and white signal.

5. Fully demagnetize the receive by applying an external degaussing coil.

6. Turn the CONTRAST and BRIGHTNESS controls to maximum.

7. Loosen the clamp screw holding the yoke. Slide the yoke backward or forward to provide vertical green belt. (Fig. 4-3).

8. Tighten the convergence yoke.

9. Slowly move the deflection yoke forward, and adjust for the best overall green screen.

10. Temporarily tighten the deflection yoke.

11. Produce blue and red rasters by adjusting the low-light controls. Check for good purity in each field.

12. Tighten the deflection yoke.

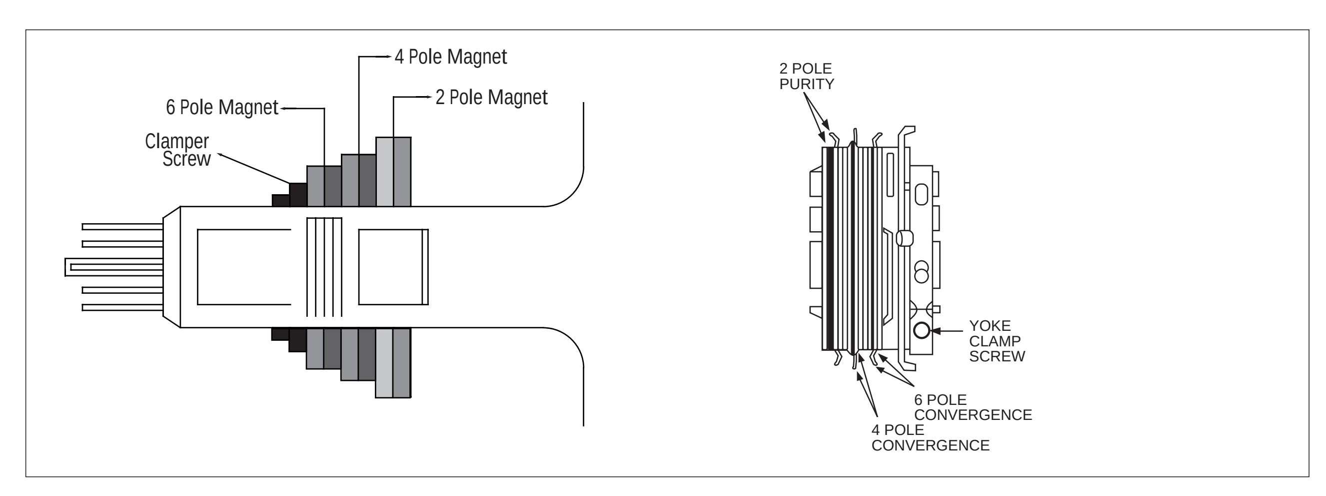


Fig. 4-2 Convergence Magnet Assembly

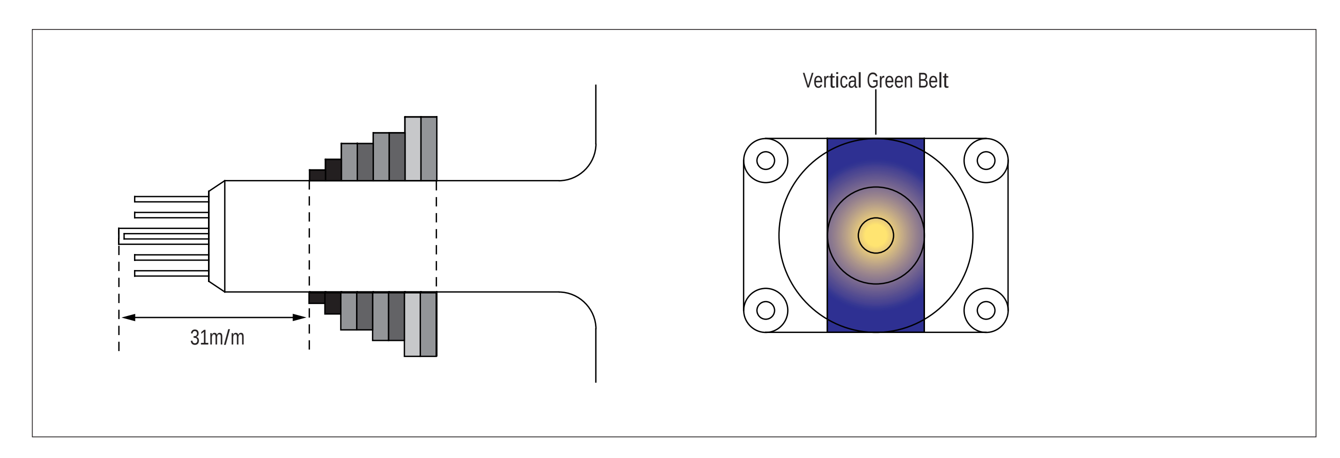


Fig. 4-3 Center Convergence Adjustment

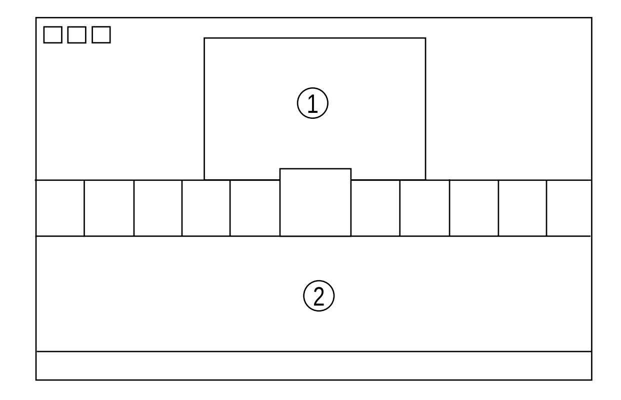


Fig. 4-4

4-3-7 White Balance Adjustment

(a) Set up

1. Warm up the TV for at least 30 minutes in the Aging Mode (OSD White). This mode is displayed by entering the following sequence:

   SLEEP →FACTORY → FACTORY

2. Input a Toshiba pattern.

(b) High-Light Adjustment

1. Set SBT to 2.0 fL in the Factory Service Mode with using CA100. See Fig. 4-4 ②.

2. Adjust RG,BG so that the levels are suitable to each local area.

(c) Low-Light Adjustment

1. Set SCT to 50.0 fL in the Factory Service Mode with using CA100. See Fig. 4-4 ①.

4-3-8 Center Convergence Adjustment

1. Warm up the receiver for at least 20 minutes.

2. Adjust the two tabs of the 4 pole magnets to change the angle between them. Superimpose the red and blue vertical lines in the center area of the screen.

3. Adjust the Brightness and Contrast controls for a well defined picture.

4. Adjust the two-tab pairs of the 4 pole magnets, and change the angle between them. Superimpose the red and the blue vertical lines in the center area of the screen.

5. Turn the both tabs at the same time, keeping the angle constant, and superimpose the red and blue horizontal line in the center of the screen.

6. Adjust the two-tab pairs of the 6-pole magnets to superimpose the red and blue line onto the green. (Changing the angle affects the vertical lines, and rotating both magnets affects the horizontal lines.)

7. Repeat adjustments 2~6, if necessary.

8. Since the 4-pole magnets and 6-pole magnets interact, the dot movement is complex (Fig. 4-5).

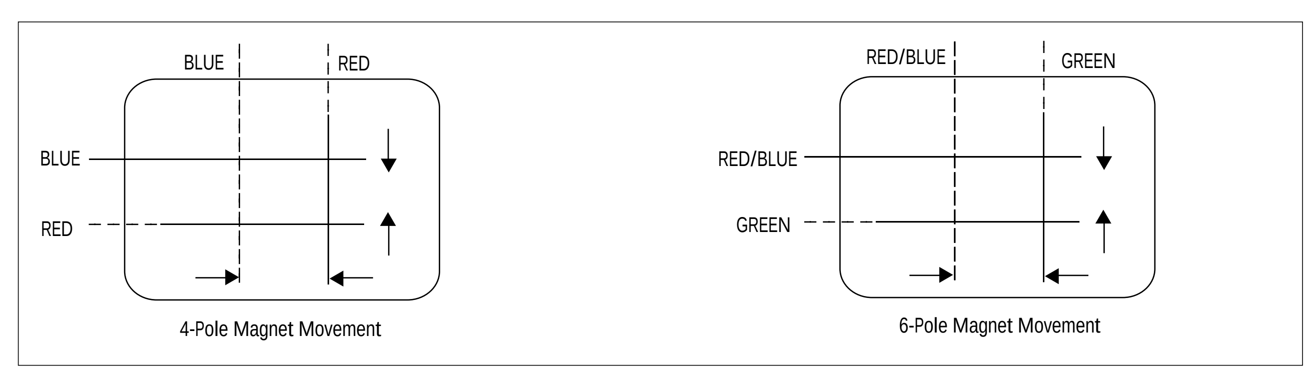


Fig. 4-5 Center Convergence Adjustment

4-3-9 VCO Adjustment

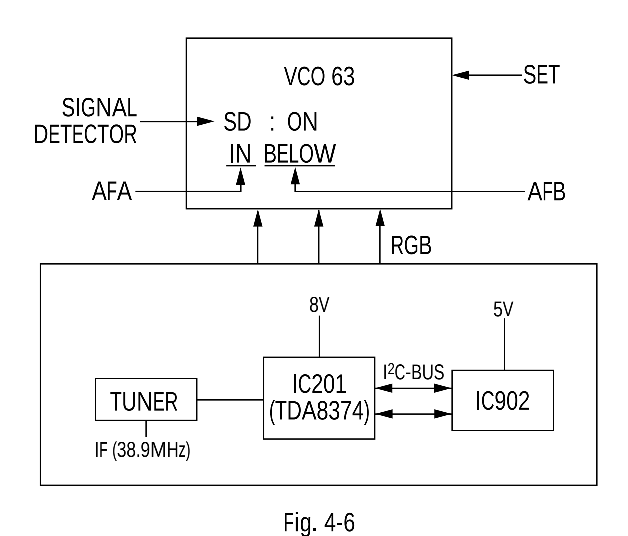


Fig. 4-6

1. Turn on the TV.

2. Set IF port of tuner to 38.9MHz. (Use a pattern generator).

3. Input a color bar pattern (PAL-B/G system).

4. In the Factory Service Mode, select "Adjustment → VCO" and set VCO data to 63.

5. Ensure "SD On" (Signal Input) and "SD Off" (No Signal).

6. Adjust T201 (connected to TDA8374A pins3,4) so that AFA Bit is "INSIDE WINDOW" (the AFB Bit is above~below).

4-3-10 RF AGC Adjustment

1. Connect a pattern generator (PM5418) RF signal to tuner RF.

2. Select a gray scale pattern and PAL-B/G system. Set to 479.25MHz.

3. Connect IC201 (ONECHIP) pin 53 to a digital multimeter.

4. Adjust AGC (using volume keys)in the Factory Service Mode. Set IC201 (ONECHIP) pin 54 to 3.7 ± 0.05V (DC).

5. Adjust AGC within 20 seconds after power ON.

4-3-11 Sub-Color Adjustment

Set the SCR data steps to 15 in the Factory Mode.

4-3-12 Geometry Adjustment

(SC →PVA→PVS→ PSL →PHS)

1. Input a lion head pattern (in the PAL channel).

2. Set the SC (S-Correction) 10 data steps and PSL 20 data steps so that the lion head circle becomes oval.

3. Adjust with PVS (Vertical-shift) : Lion head pattern and mechanical centers must be aligned.

4. Adjust with PVA (Vertical-Amplitude) : Top margin of the picture is 4.

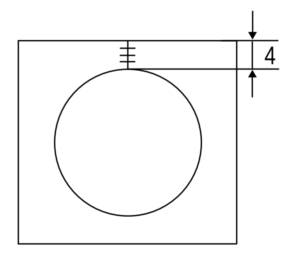


Fig. 4-7

5. Adjust with PSL (Vertical-Slope) : Bottom margin of the picture is 4.

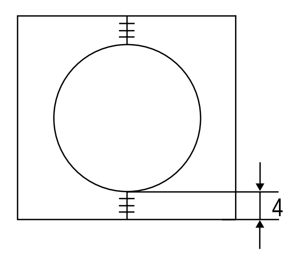


Fig. 4-8

6. Adjust with PHS (Horizontal Shift) : Lion head pattern and CRT centers are aligned.

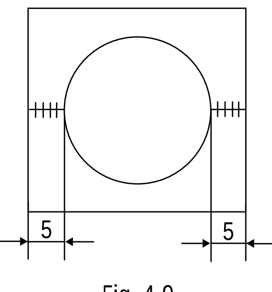


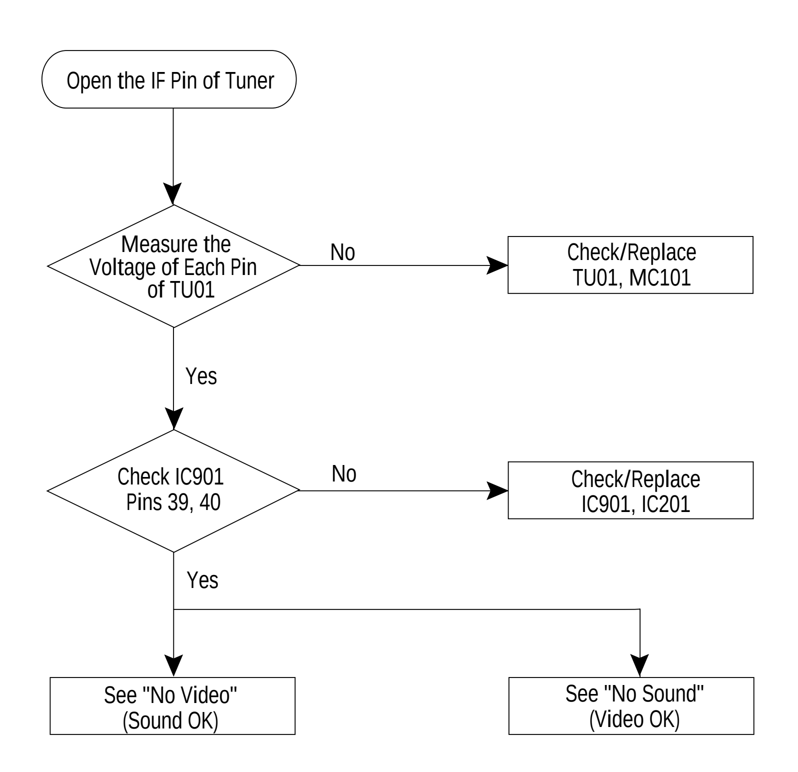
Fig. 4-9

7. Adjust PHS (using the width coil) so that left and right margins of the picture are 5.

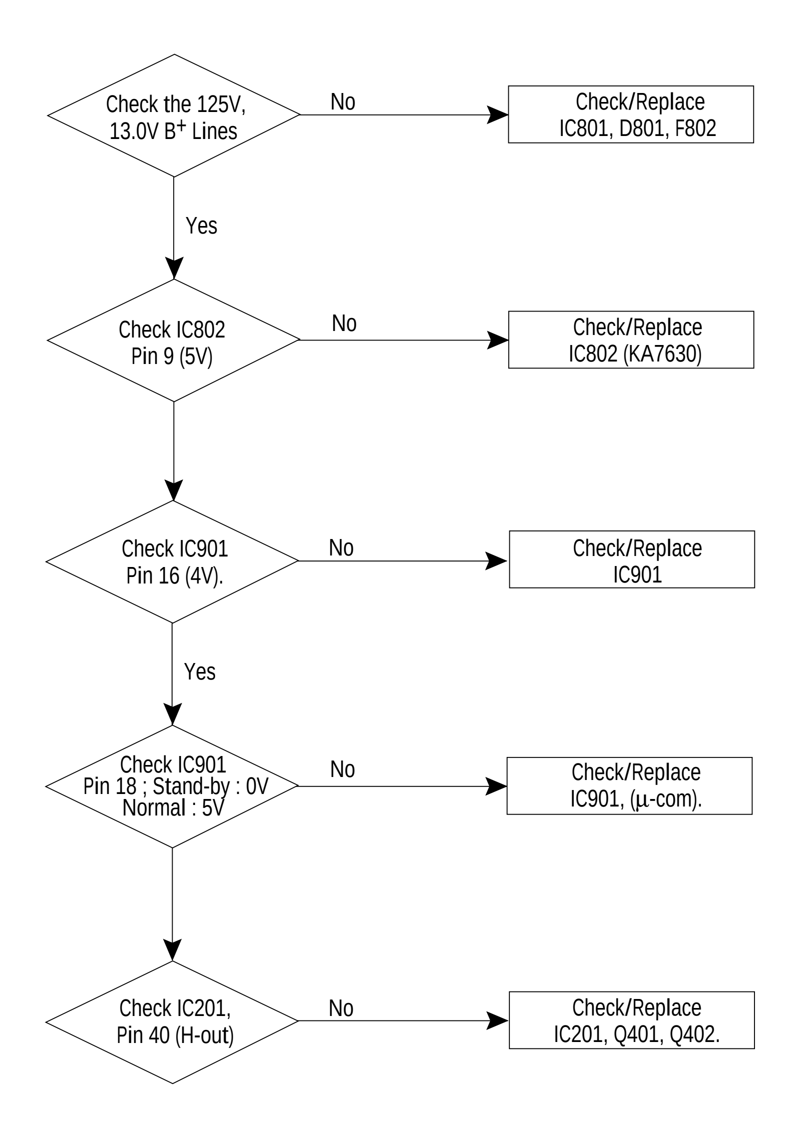
MEMO

5. Troubleshooting

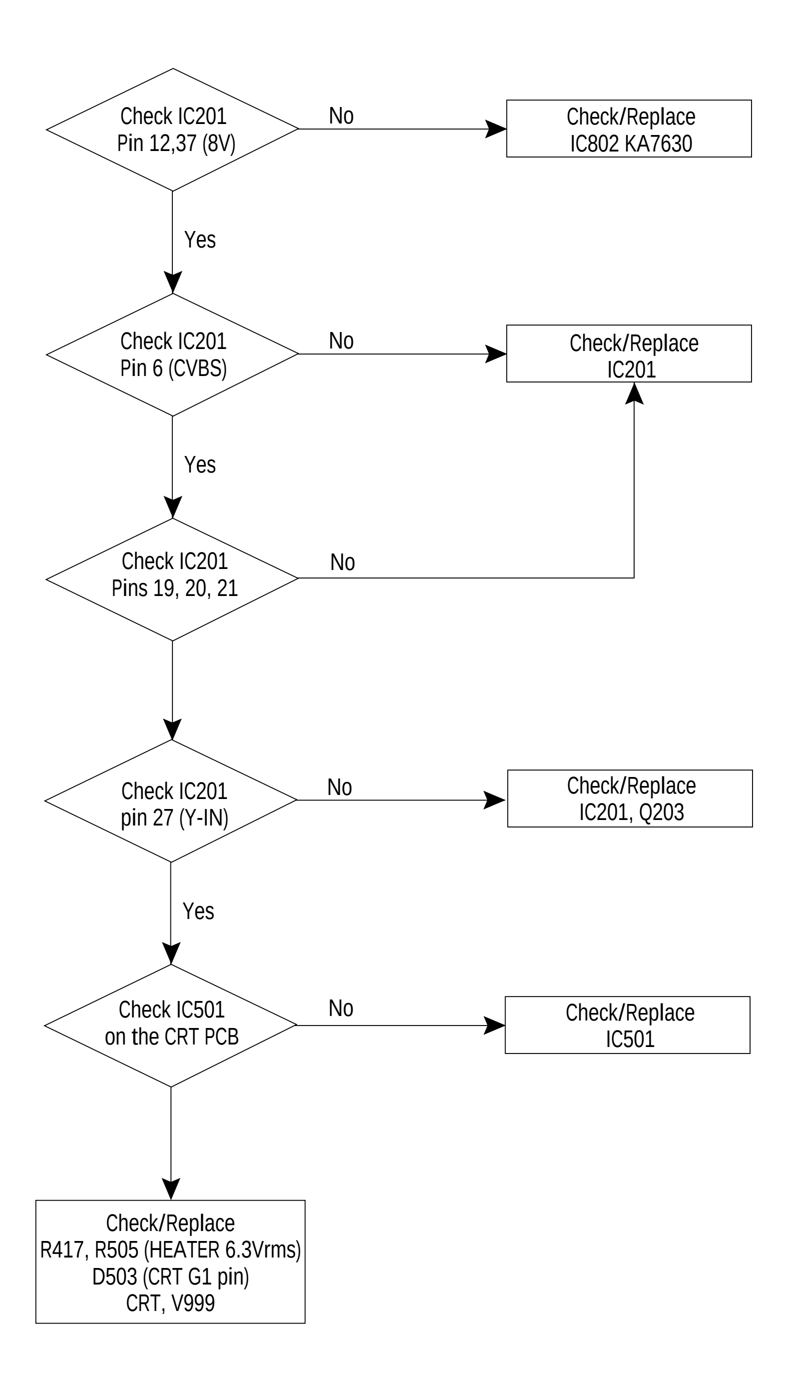
5-1 No Video (Raster On, No Sound)



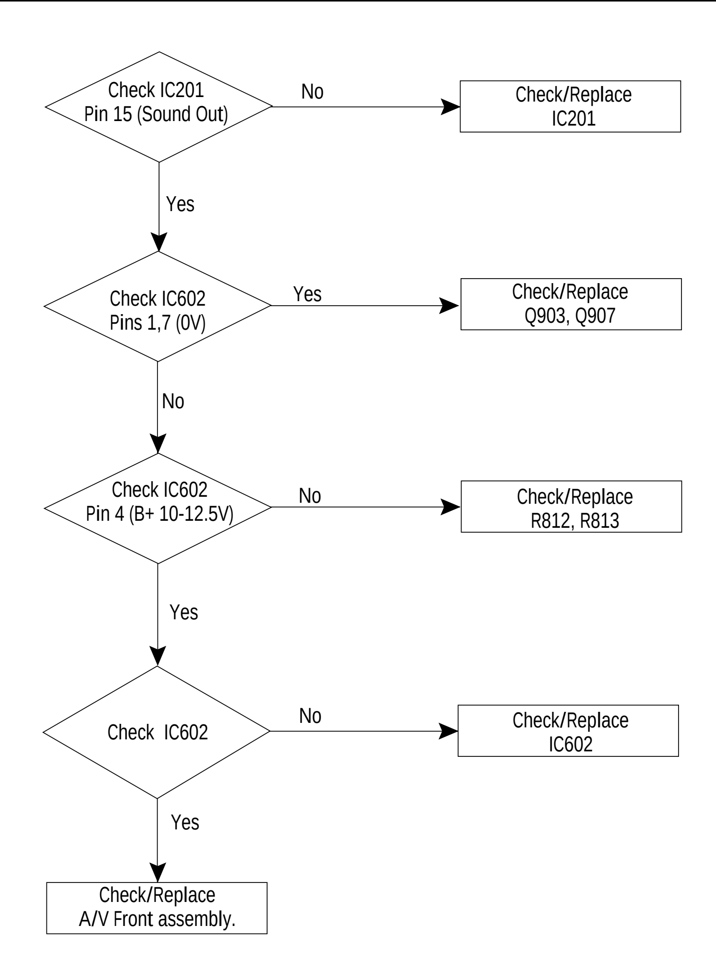
5-2 No Power


Check the 125V,
13.0V B+ Lines
No
Check/Replace
IC801, D801, F802
Yes
Check IC802
Pin 9 (5V)
No
Check/Replace
IC802 (KA7630)
Check IC901
Pin 16 (4V).
No
Check/Replace
IC901
Yes
Check IC901
Pin 18 ; Stand-by : 0V
Normal : 5V
No
Check/Replace
IC901, (µ-com).
Check IC201,
Pin 40 (H-out)
No
Check/Replace
IC201, Q401, Q402.

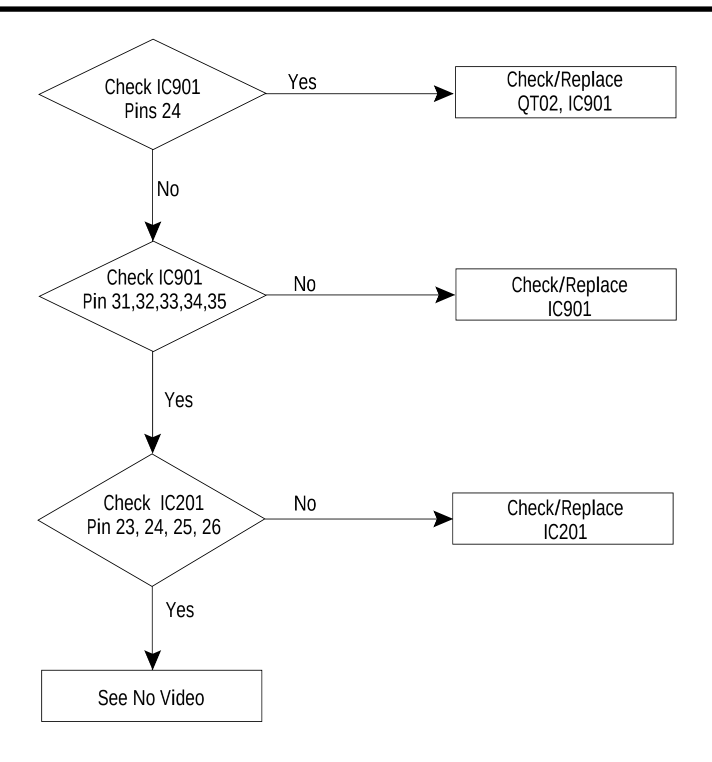
5-3 No Video (Sound OK)



5-4 No Sound (Video OK)

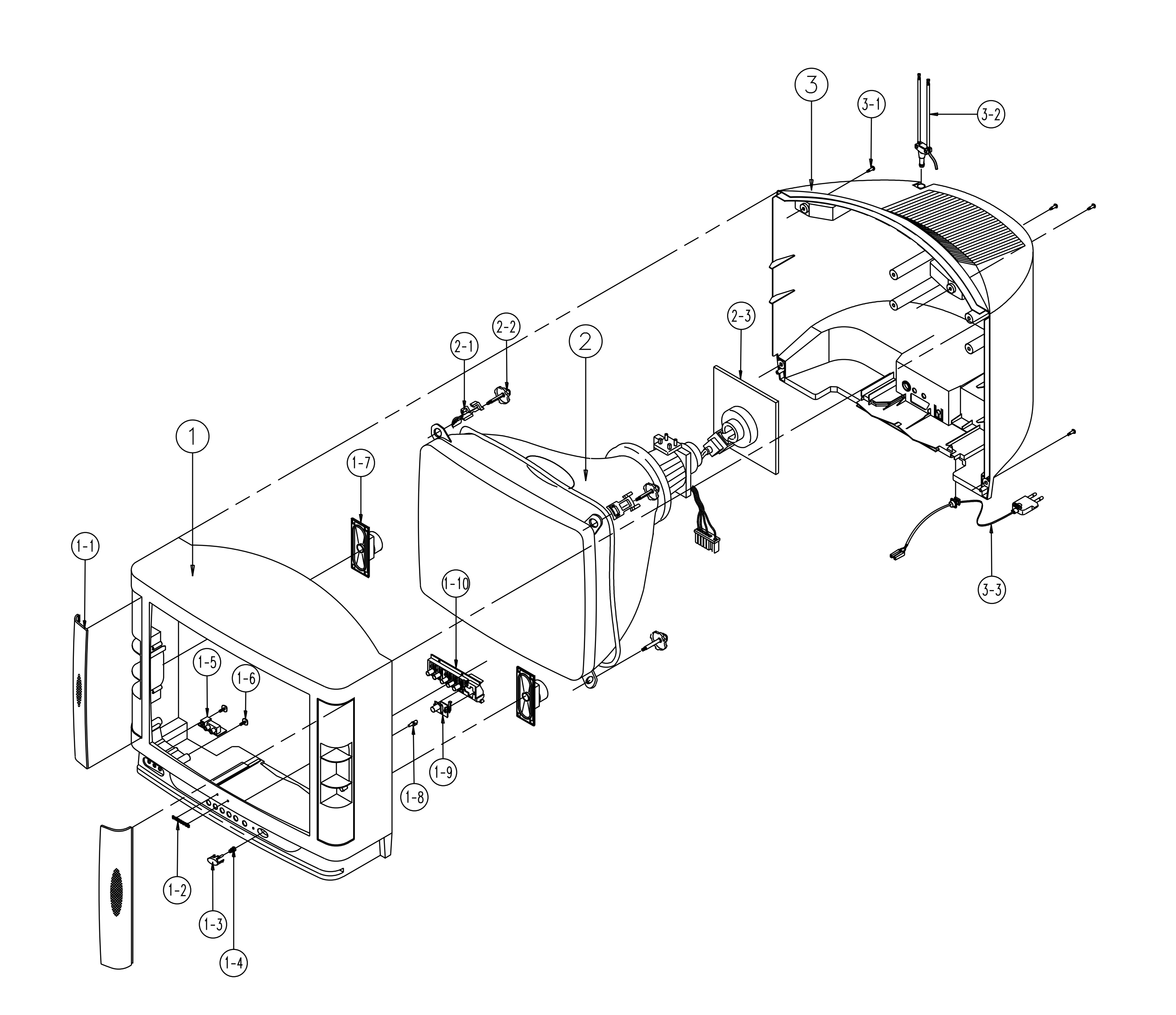


5-5 No TTX



6. Exploded View & Parts List

6-1 CK5039TR4X/BWT



No	Code No	Description	Specification	Q'ty	Remark
1	AA91-10344F	ASSY-CABINET,FRONT	-,CK5039TR,PA100 MLN,	1	
	AA64-31142Y	CABINET-FRONT	-,CK5039T,PA100 MGN.HIPS	1	
1-1	AA63-50011B	GRILLE-WOOFER	-,5039,PA110,SECC,T0.5,-,-	2	
1-2	AA64-70010B	BADGE-BRAND	AL,SS R2000 25,SILVER,L50,-,	1	
1-3	AA64-10144A	KNOB-POWER,M	-,5039,-,ABS,HB,BLK	1	
1-4	AA61-60003J	SPRING-CS	-,SUS304,0.5,OD6,H12,N7,-,-,-	1	
1-5	AA95-90018U	ASSY-PCB FRONT A/V	-,39,85,SCT13B,MULTI,	1	
1-6	AA60-10002A	SCREW-TAPPING	RH,+,M4,L12,ZPC(YEL),-,OD1	2	
1-7	AA91-60028A	ASSY-HOLDER,SPK	-,ABS,-,-,80HM 5W,5085	1	
1-8	AA64-40055A	WINDOW-REMOCON	-,5039,NO-SILK,PC,-,-,-	1	
1-9	AA64-40167A	INDICATOR-LED	-,5039,-,ACRYL,-,-,-	1	
1-10	AA64-10048A	KNOB-CONTROL	-,5039,-,ABS,HB,BLK	1	
2	AA03-10003L	CRT-COLOR	-,A48KRD82X(U),+380MG,20,90DE	1	
2-1	AA65-30019A	CLAMP-D,COIL	NYLON-66,V0,NTR,DADH-460 20	2	
2-2	AA60-10050D	SCREW-ASSY	WC,HH,+,M5,L33,SWRCH18,ZPC(YE	4	
2-3	3704-000110	SOCKET-CRT	14P,29.1,25.5,SN,ISHS09S/BK	1	
3	AA64-30389D	CABINET-BACK	-,5039,-,HIPS,V2,BLK,-,-	1	
3-1	6002-000514	SCREW-TAPPING	RH,+,2,M4,L15,ZPC(BLK),SWR	4	
3-2	AA42-10001V	ANT-ROD	-,3S,620mm,BRN,UL/CSA	1	
3-3	AA39-10001G	POWER-CORD	-,KKP-419C,KLCE-2F,2.286M,HOU	1	

7. Electric Parts List

7-1 CK5339TR4S/BWT (CK5039TR4X AND CK5339TR4S Dissimilar Parts)

Loc. No.	Code No.	Description ; Specification	Remark
		ASSY-PCB,MAIN(OPT)	
		BUYER : CIS (RUSSIA)	
NWT	AA94-10127V	ASSY-PCB,MAIN(OPT);CK5339TR4S/NWT,SCT13B	
BWT	AA94-10125M	ASSY-PCB,MAIN(OPT);CK5339TR4X/BWT,SCT13B	
C409	2306-000237	C-FILM,MPPF;6.3nF,5%,1.6KV,TP,28.5x18x11	
CN802	AA27-20001Z	COIL-DEGAUSSING;-,21,14.5ohm,35T,L2500,	
R253	2001-000337	R-CARBON;130Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R301	2004-000717	R-METAL;3.6Kohm,1%,1/8W,AA,TP,1.8x3.2m	
R305	2004-004087	R-METAL(S);1.5ohm,1%,1/2W,AA,TP,2.5x6.5m	
R307	2003-001034	R-METAL OXIDE(S);270OHM,5%,1W,AF,TP,2.5X	
		ASSY-CRT	
⚠ NWT	AA03-10006W	CRT-COLOR;-,A51KQJ63X02(U),380MG,21,90D	
⚠ BWT	AA03-10004J	CRT-COLOR;-,A51KQJ63X(U),+380MG,21,90DE	
⚠	AA27-50002G	DEFLECTION-YOKE;-,DST-2192ML(1),21/A51K	
		ASSY-ACCESSORY	
NWT	AA68-11169A	MANUAL-USERS;SCT13B,N-RUS,TM48,B5,W/P	
BWT	AA68-11139A	MANUAL-USERS;SCT13B,RUSSIAN,TM48,B5,W/P	
		ASSY-CABINET OPTION (CK5339T4X)	
	AA91-10165M	ASSY-CABINET,FRONT;DP,CK5339TR,PA100	
	AA64-30137V	CABINET-FRONT;-,CK5339TR,PA100	
	AA64-10014A	KNOB-CONTROL;-,5339,-,ABS,HB,BLK	
	AA64-30386D	CABINET-BACK;-,5339,-,HIPS,V2,BLK,-,-	
	AA64-40053A	WINDOW-REMOCON;-,5339,-,PC,-,-,-	
	AA64-40186A	INDICATOR-LED;-,5339,-,ACRYL,-,-,-	
	AA61-60003E	SPRING-CS;-,SUS304,0.5,OD8,H9,N5,-,-,-	
	AA63-50053B	GRILLE-WOOFER;-,5339,PA110,SECC,T0.5,-,-	
	AA64-10185A	KNOB-POWER,M;-,5339,-,ABS,HB,BLK	

7-2 CK5039TR4X/BWT Parts List

Loc. No.	Code No.	Description ; Specification	Remark
		ASSY-PCB,MAIN(OPT)	
		BUYER : CIS (RUSSIA)	
BWT	AA94-10127K	ASSY-PCB,MAIN(OPT);CK5039TR4X/BWT,SCT13B	
NWT	AA94-10127X	ASSY-PCB,MAIN(OPT);CK5039TR4S/NWT,SCT13B	
C101	2401-000914	C-AL;22uF,20%,16V,-,TP,5x11,5mm	
C102	2401-001082	C-AL;330NF,20%,50V,GP,TP,5X11MM,5MM	
C103	2401-000808	C-AL;220uF,20%,16V,GP,8x11mm,5mm,TP	
C104	2401-000758	C-AL;220NF,20%,50V,GP,TP,5X11MM,5MM	
C113	2401-000947	C-AL;22uF,20%,35V,GP,TP,5x11mm,-	
C201	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5	
C202	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5mm	
C203	2401-000660	C-AL;2.2uF,20%,50V,GP,TP,5x11mm,5mm	
C205	2305-000411	C-FILM,MPEF;470nF,5%,50V,TP,7.3x4.8x5.5m	
C206	2305-000412	C-FILM,MPEF;470nF,5%,63V,TP,-,5mm	
C207	2305-000196	C-FILM,MPEF;150nF,5%,63V,TP,-,5mm	
C208	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C209	2202-000794	C-CERAMIC,MLC-AXIAL;18pF,5%,50V,CH,TP,3.	
C210	2301-000264	C-FILM,PEF;4.7nF,5%,50V,TP,6.5X5.5X3.0X5	
C211	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C212	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C213	2201-000257	C-CERAMIC,DISC;16pF,5%,50V,CH,TP,5x3,5	
C214	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C215	2301-000201	C-FILM,PEF;2.2nF,5%,50V,TP,7.4x3.9x13mm,	
C216	2401-001271	C-AL;4.7UF,20%,50V,GP,TP,4X7,5MM	
C219	2401-000603	C-AL;1UF,20%,50V,GP,TP,5X11MM,5MM	
C221	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C222	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C224	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C226	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm	
C227	2401-001530	C-AL;47UF,20%,25V,GP,TP,5X11MM,5MM	
C228	2201-000257	C-CERAMIC,DISC;16pF,5%,50V,CH,TP,5x3,5	
C230	2401-001530	C-AL;47UF,20%,25V,GP,TP,5X11MM,5MM	
C231	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C232	2401-000302	C-AL;100uF,20%,25V,GP,TP,6.3x11,5mm	
C234	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C235	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C238	2401-001530	C-AL;47UF,20%,25V,GP,TP,5X11MM,5MM	
C239	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C240	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C247	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
C248	2309-000138	C-FILM,PE-PPF;100nF,5%,50V,TP,20x16x8.5,	
C249	2401-000603	C-AL;1UF,20%,50V,GP,TP,5X11MM,5MM	
C250	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm	
C251	2301-000204	C-FILM,PEF;2.7nF,5%,50V,TP,7.4x3.9x13mm,	
C252	2301-000264	C-FILM,PEF;4.7nF,5%,50V,TP,6.5X5.5X3.0X5	
C253	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C254	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C255	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C301	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C302	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C303	2401-003028	C-AL;100uF,20%,25V,WT,TP,6.3x11,5mm	
C304	2401-002293	C-AL;68uF,20%,100V,WT,TP,10x20,5	
C306	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5	
C307	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5	

Loc. No.	Code No.	Description ; Specification	Remark
C308	2305-000450	C-FILM,MPEF;56nF,5%,100V,TP,-,5mm	
C401	2301-000380	C-FILM,PEF;10nF,5%,50V,TP,6.5x3mm,5mm	
C402	2201-000599	C-CERAMIC,DISC;560pF,10%,500V,Y5P,TP,7x4	
C403	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4	
C404	2401-002288	C-AL;470uF,20%,25V,WT,TP,10x20,5	
C405	2305-000354	C-FILM,MPEF;330NF,5%,50V,TP,7.3X4.8X5.5M	
C406	2401-000440	C-AL;10UF,20%,25V,GP,TP,5X11MM,5MM	
C407	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C408	2401-001530	C-AL;47UF,20%,25V,GP,TP,5X11MM,5MM	
C409	2306-000253	C-FILM,MPPF;7.2nF,5%,1.6KV,TP,28.5x18.5x	
C410	2201-000406	C-CERAMIC,DISC;270pF,10%,2KV,Y5P,TP,8x6,	
C411	2401-002278	C-AL;22uF,20%,250V,WT,TP,13x21,5	
C413	2305-000382	C-FILM,MPEF;4.7nF,5%,400V,TP,-,5mm	
C414	2305-000154	C-FILM,MPEF;100nF,5%,400V,TP,21.5x6.5x11	
C415	2401-000560	C-AL;1uF,20%,160V,GP,TP,6.3*11,5mm	
C416	2306-000204	C-FILM,MPPF;430nF,5%,400V,TP,26x20.5x12.	
C417	2201-000556	C-CERAMIC,DISC;470pF,10%,500V,Y5P,TP,7x4	
C418	2401-002293	C-AL;68uF,20%,100V,WT,TP,10x20,5	
C419	2201-000984	C-CERAMIC,DISC;680pF,10%,2KV,Y5P,TP,11x6	
C502	2301-000213	C-FILM,PEF;220nF,5%,250V,TP,21.5x11,7.5	
C503	2201-000969	C-CERAMIC,DISC;10NF,+80-20%,3KV,Y5V,TP,-	
C504	2401-001232	C-AL;4.7uF,20%,250V,GP,TP,10x12.5mm	
C506	2401-000430	C-AL;10uF,20%,250V,GP,TP,10x16mm,5m	
C601	2202-000199	C-CERAMIC,MLC-AXIAL;22nF,+80-20%,25V,Y5V	
C602	2401-000947	C-AL;22uF,20%,35V,GP,TP,5x11mm,-	
C603	2301-000264	C-FILM,PEF;4.7nF,5%,50V,TP,6.5X5.5X3.0X5	
C604	2401-001323	C-AL;470nF,20%,50V,BP,TP,5x11,5mm	
C610	2401-001998	C-AL;1000uF,20%,25V,GP,TP,10x20,5mm	
C611	2301-000264	C-FILM,PEF;4.7nF,5%,50V,TP,6.5X5.5X3.0X5	
C612	2401-001323	C-AL;470nF,20%,50V,BP,TP,5x11,5mm	
C613	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C614	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C702	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C703	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C704	2202-000121	C-CERAMIC,MLC-AXIAL;100pF,10%,50V,Y5P,1.	
C705	2401-001264	C-AL;4.7UF,20%,50V,BP,TP,5X11,5MM	
C706	2401-001264	C-AL;4.7UF,20%,50V,BP,TP,5X11,5MM	
C800	2306-000321	C-FILM,MPPF;470nF,5%,250V,TP,-,22.5mm	
C801	2401-002213	C-AL;150uF,+30-10%,450V,GP,BK,25x35	
C802	2401-002284	C-AL;33uF,20%,50V,GP,TP,5x11mm,5mm	
C803	2301-000224	C-FILM,PEF;22nF,5%,50V,TP,7.4x3.9x13mm	
C804	2201-000144	C-CERAMIC,DISC;100pF,5%,50V,CH,TP,8x3,5	
C805	2303-000163	C-FILM,PPF;2.2nF,5%,800V,TP,15x13x8.5,7.	
C806	2201-000446	C-CERAMIC,DISC;3.3nF,20%,400V,Y5U,TP,18x	
C807	2201-000991	C-CERAMIC,DISC;560pF,10%,2KV,Y5P,TP,13x7	
C808	2401-000262	C-AL;100UF,20%,160V,HR,TP,16X25,7.5	
C809	2401-001527	C-AL;47uF,20%,250V,HR,TP,13x25mm,5m	
C810	2201-000991	C-CERAMIC,DISC;560pF,10%,2KV,Y5P,TP,13x7	
C811	2401-003141	C-AL;2200UF,20%,25V,WT,TP,13X25,5MM	
C812	2401-001998	C-AL;1000uF,20%,25V,GP,TP,10x20,5mm	
C814	2301-000192	C-FILM,PEF;1nF,5%,50V,TP,5.3x10mm,5mm	
C815	2401-000832	C-AL;220uF,20%,25V,GP,TP,8x11.5,5mm	
C818	2401-001495	C-AL;47uF,20%,16V,GP,5x11mm,5mm,TP	
C819	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5mm	
C820	2201-000119	C-CERAMIC,DISC;100nF,+80-20%,50V,Y5V,TP,	
C901	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5mm	
C902	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C904	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C905	2401-001333	C-AL;470nF,20%,50V,GP,TP,5x11,5	
C907	2201-000119	C-CERAMIC,DISC;100nF,+80-20%,50V,Y5V,TP,	
C908	2201-000980	C-CERAMIC,DISC;30pF,5%,50V,CH,TP,5.0x3.0	
C909	2201-000980	C-CERAMIC,DISC;30pF,5%,50V,CH,TP,5.0x3.0	
C910	2201-000119	C-CERAMIC,DISC;100nF,+80-20%,50V,Y5V,TP,	
C911	2401-000440	C-AL;10UF,20%,25V,GP,TP,5X11MM,5MM	
C912	2201-000234	C-CERAMIC,DISC;150pF,5%,50V,NPO,10x3.5mm	
C913	2301-000108	C-FILM,PEF;1.5nF,5%,50V,TP,6.5x3.0x5.5mm	
C914	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5	
C915	2305-000149	C-FILM,MPEF;100nF,5%,100V,TP,12x12.5x6.5	
C916	2301-000188	C-FILM,PEF;1nF,5%,100V,TP,10.5x12.5x6.5,	
C917	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
C920	2401-000480	C-AL;10uF,20%,50V,GP,TP,5x11,5	
C923	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
C924	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
C926	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
CN01	2202-000127	C-CERAMIC,MLC-AXIAL;10nF,+80-20%,25V,Y5V	
CN501	AA39-20122A	LEAD-CONNECTOR,ASSY;-,YBNH025-08,YBNH025	
CN602	3711-002643	CONNECTOR-HEADER;BOX,4P,1R,2.5MM,STRAIGH	
CN701	3711-000628	CONNECTOR-HEADER;AUTO,11P,1R,2.5mm,STRAI	
CN802	AA27-20002A	COIL-DEGAUSSING;-,20,13.5OHM,35T,L2300,	
CT01	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
CT02	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
CT03	2401-001495	C-AL;47uF,20%,16V,GP,5x11mm,5mm,TP	
CT04	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
CT06	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
CT07	2401-001495	C-AL;47uF,20%,16V,GP,5x11mm,5mm,TP	
CW901	2503-000156	C-NETWORK;100pFx4,20%,50V	
D201	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D204	0402-000216	DIODE-RECTIFIER;ERC24-06,600V,1.0A,DO-20	
D205	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D209	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D210	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D215	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D216	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D217	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D401	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41	
D402	0402-000132	DIODE-RECTIFIER;1N4004,400V,1A,DO-41	
D403	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D404	0402-000534	DIODE-RECTIFIER;RG10V,400V,1.2A,DO-201,T	
D405	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D406	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D501	0402-000216	DIODE-RECTIFIER;ERC24-06,600V,1.0A,DO-20	
D502	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D503	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D504	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D701	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D800	1405-000152	VARISTOR;560V,2500A,14x8.5mm,TP	
D801	0402-000102	DIODE-BRIDGE;D2SB60,600V,1.5A,-	
D802	0402-000540	DIODE-RECTIFIER;RU20A,600V,1.5A,-	
D803	0402-000430	DIODE-RECTIFIER;FML-G02S,200V,3.0A,TO-22	
D804	0402-000213	DIODE-RECTIFIER;ERB12-06,600V,1.0A,DO-41	
D809	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D810	0402-001105	DIODE-RECTIFIER;ERB43-04SV1,400V,1.0A,-,	
D901	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D903	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
D905	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
DT01	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
DT02	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
DT03	0401-000005	DIODE-SWITCHING;1N4148,75V,300mA,DO-35,T	
DZ201	0403-000295	DIODE-ZENER;MTZ5.1B,5.1V,4.94-5.20V,500m	
DZ203	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ207	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ208	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ301	0403-000660	DIODE-ZENER;MTZ22A,22V,20.15-21.2V,500mW	
DZ302	0403-001039	DIODE-ZENER;MA2560,56V,52-60V,1W,DO-41,T	
DZ401	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ501	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ502	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ503	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ504	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ701	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ702	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ703	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ704	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ705	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ802	0403-000297	DIODE-ZENER;MTZ6.2B,6.2V,5.96-6.27V,500m	
DZ803	1203-001217	IC-POSI.ADJUST REG.;431,TO-92,3P,4.58MIL	
DZ804	0403-000294	DIODE-ZENER;MTZ4.7B,4.55-4.80V,500mW,DO-	
DZ805	2003-000706	R-METAL OXIDE(S);47Kohm,5%,2W,AA,TP,4.3x	
DZ806	0403-000295	DIODE-ZENER;MTZ5.1B,5.1V,4.94-5.20V,500m	
DZ807	0403-000297	DIODE-ZENER;MTZ6.2B,6.2V,5.96-6.27V,500m	
DZ901	0403-000563	DIODE-ZENER;MTZ9.1B,9.1V,8.57-9.01V,500m	
DZ902	0403-000295	DIODE-ZENER;MTZ5.1B,5.1V,4.94-5.20V,500m	
DZ903	1203-000451	IC-VOLTAGE REGULATOR;33,TO-92,3P,-,PLAST	
DZ905	0403-000296	DIODE-ZENER;MTZ5.6B,5.6V,5.45-5.73V,500m	
DZ907	0403-000296	DIODE-ZENER;MTZ5.6B,5.6V,5.45-5.73V,500m	
⚠F801	3601-000261	FUSE-FERRULE;250V,3.15A,TIME LAG,GLASS,5	
F801A	3602-000114	FUSE-HOLDER;-,-,30mohm	
F801B	3602-000114	FUSE-HOLDER;-,-,30mohm	
⚠F802	3601-001086	FUSE-FERRULE;125V,5A,QUICK-ACTING,CERAMI	
⚠HC101	AA13-20004A	IC-HYBRID;-,PAP102T,SIP,6P,PRE-AMP,TP	
⚠IC201	1204-001191	IC-PAL/NTSC PROCESS;TDA8374A(N3),DIP,56P	
⚠IC301	1204-000441	IC-IF CIRCUIT;TDA8356,SIP,9P,-,PLASTIC,4	
⚠IC501	1201-001159	IC-VIDEO AMP;6107,ZIP,9P,300MIL,SINGLE,-	
⚠IC602	1201-000537	IC-AUDIO AMP;7057,ZIP,13P,-,DUAL,40DB,PL	
⚠IC801	1203-001313	IC-PWM CONTROLLER;3S0680,TO-3P,5,150MIL,	
⚠IC802	1203-000644	IC-POSI.FIXED REG.;7630,SIP,10P,-,PLASTI	

Loc. No.	Code No.	Description ; Specification	Remark
⚠ IC805	1203-000243	IC-POSI.FIXED REG.;7812A,TO-220,3P,-,PLA	
⚠ IC901	AA13-30018L	IC-MCU;-,SAA5291PS-032,8BIT,SDIP,CK-5	
⚠ IC902	1103-000156	IC-EEPROM;24C04,512X8BIT,DIP,8P,300MIL,1	
⚠ IC903	1203-000641	IC-RESET;7442,TO-92,3P,-,PLASTIC,-0.3/7	
J184	2001-000857	R-CARBON;560ohm,5%,1/8W,AA,TP,1.8x3.2mm	
J185	2001-000857	R-CARBON;560ohm,5%,1/8W,AA,TP,1.8x3.2mm	
J191	2001-000857	R-CARBON;560ohm,5%,1/8W,AA,TP,1.8x3.2mm	
JS701	3722-000183	JACK-SCART;21P,4mm,SN,BLK,NO	
L101	2701-000171	INDUCTOR-AXIAL;330nH,10%,2.5x3.4mm	
L102	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L103	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L202	2701-000197	INDUCTOR-AXIAL;5.6uH,10%,2.5x3.4mm	
L206	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L301	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L302	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
L304	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
L305	2701-000116	INDUCTOR-AXIAL;10uH,10%,4.2x9.8mm	
L401	AA27-30001B	COIL-LINEARITY;-,195UH,QIC1010,PI0.4,4.5	
L402	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L601	2701-000197	INDUCTOR-AXIAL;5.6uH,10%,2.5x3.4mm	
L702	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L703	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L704	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L705	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L706	2701-000184	INDUCTOR-AXIAL;4.7uH,10%,2.5x3.4mm	
L801	AA29-30001B	FILTER-LINE;-,27MH,-,-,-	
L804	3301-000287	CORE-FERRITE BEAD;AA,3.5x1x6mm,1500,2400	
L805	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L807	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
L809	AA27-10002Y	COIL-CHOKE;-,100UH,K,10,700MA,T,100UH-K(	
L810	AA27-10002Y	COIL-CHOKE;-,100UH,K,10,700MA,T,100UH-K(	
L902	2701-000189	INDUCTOR-AXIAL;470nH,10%,2.5x3.4mm	
L903	2701-000136	INDUCTOR-AXIAL;18uH,10%,2.5x3.4mm	
LD901	AA96-30001B	ASSY-LED,GUIDE;-,AA61-50055A,DL-G5RGA,-	
LT01	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
LT02	2901-000297	FILTER-EMI ON BOARD;-,3A,-,-,3.5x5,TP,-	
LT03	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
NT801	1404-000187	THERMISTOR-NTC;4.7ohm,15%,2800K,27.2mW/C	
P801	1404-000180	THERMISTOR-PTC;14ohm,20%,-,290V,25A,-,ST	
PC801	0604-001038	PHOTO-COUPLER;TR,130-260%,200mW,DIP-4,ST	
Q201	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q202	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q203	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
Q204	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q206	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q251	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
⚠ Q401	0502-000295	TR-POWER;KSD5072YD,NPN,1500V,800V,5A,60	
⚠ Q402	0501-000369	TR-SMALL SIGNAL;KSC2331-Y,NPN,1W,TO-92L,	
Q701	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q703	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
Q704	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
Q901	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q902	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q903	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
Q904	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
Q905	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
Q906	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
Q907	0504-000125	TR-DIGITAL;KSR1012,NPN,300mW,47K,TO-92,T	
Q908	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
QT02	0501-000389	TR-SMALL SIGNAL;KSC815,NPN,400mW,TO-92,T	
QT03	0504-000123	TR-DIGITAL;KSR1010,NPN,300mW,10K,TO-92,T	
R200	2001-000780	R-CARBON;470 OHM,5%,1/8W,AA,T	
R201	2001-000005	R-CARBON;390ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R202	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R203	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R204	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R205	2001-000793	R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R207	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R208	2001-000832	R-CARBON;510ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R209	2001-000016	R-CARBON(S);1ohm,5%,1/2W,AA,TP,2.4x6.4mm	
R210	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R211	2001-000331	R-CARBON;12Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R212	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R213	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R214	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R215	2004-001995	R-METAL;9.1Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R216	2001-000490	R-CARBON;200ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R217	2001-001411	R-CARBON;5.6Mohm,5%,1/8W,AA,TP,1.7x3.2m	
R218	2001-000591	R-CARBON;3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R219	2001-000008	R-CARBON;15Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R220	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R221	2001-000660	R-CARBON;33Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R222	2001-000397	R-CARBON;180Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R223	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R224	2001-000563	R-CARBON;27Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R225	2001-000857	R-CARBON;560ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R226	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R227	2004-001234	R-METAL;75Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R228	2001-000832	R-CARBON;510ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R230	2001-000793	R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R231	2001-000563	R-CARBON;27Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R232	2001-000273	R-CARBON;100Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R234	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R235	2004-001089	R-METAL;560Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R236	2003-000634	R-METAL OXIDE(S);3.9Kohm,5%,1W,AA,TP,3.3	
R237	2001-000793	R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R240	2001-000832	R-CARBON;510ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R241	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R242	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R250	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R251	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R252	2004-001914	R-METAL;39Kohm,2%,1/8W,AA,TP,1.8x3.5mm	
R253	2001-000319	R-CARBON;120Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R254	2001-000755	R-CARBON;430Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R255	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R256	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R260	2001-000347	R-CARBON;13Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R301	2004-001983	R-METAL;2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	
R302	2008-001033	R-FUSIBLE(S);10ohm,5%,2W,AF,TP,3.9x10mm	
R303	2001-000273	R-CARBON;100Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R305	2004-001370	R-METAL(S);1.3ohm,1%,1/2W,AA,TP,2.4x6.4m	
R306	2008-000254	R-FUSIBLE(S);0.68ohm,5%,2W,AF,TP,3.9x10m	
R307	2003-001043	R-METAL OXIDE(S);510ohm,5%,1W,AF,TP,2.5x	
R401	2001-001103	R-CARBON(S);20Kohm,5%,1/2W,AA,TP,2.4x6.4	
R403	2001-001114	R-CARBON(S);270ohm,5%,1/2W,AA,TP,2.4x6.4	
R404	2008-001033	R-FUSIBLE(S);10ohm,5%,2W,AF,TP,3.9x10mm	
R405	2001-001410	R-CARBON(S);43ohm,5%,1/2W,AA,TP,2.4x6.4m	
R406	2001-001126	R-CARBON(S);300ohm,5%,1/2W,AA,TP,2.4x6.4	
R407	2001-003019	R-CARBON(S);0.39ohm,10%,1/2W,AA,TP,2.4x6	
R408	2001-000022	R-CARBON(S);33ohm,5%,1/2W,AA,TP,2.4x6.4m	
R409	2008-000204	R-FUSIBLE(S);0.22ohm,10%,1/2W,AF,TP,2.5x	
R410	2004-001408	R-METAL(S);91Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R411	2004-001408	R-METAL(S);91Kohm,1%,1/2W,AA,TP,2.4x6.4m	
R412	2003-001035	R-METAL OXIDE(S);27ohm,0.05,2W,AF,TP,3.9	
R413	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x1	
R414	2003-000540	R-METAL OXIDE(S);1Kohm,5%,2W,AF,TP,4x12m	
R415	2008-000206	R-FUSIBLE(S);1ohm,5%,1/2W,AF,TP,2.5x6.5m	
R416	2008-000277	R-FUSIBLE;68ohm,5%,1/2W,AA,TP,4.7x11mm	
R417	2008-000256	R-FUSIBLE(S);1.5ohm,5%,2W,AA,TP,3.9x10mm	
R501H	2002-001008	R-COMPOSITION;1.8Kohm,5%,1/2W,AA,TP,3.7x	
R502H	2002-001008	R-COMPOSITION;1.8Kohm,5%,1/2W,AA,TP,3.7x	
R503	2002-001008	R-COMPOSITION;1.8Kohm,5%,1/2W,AA,TP,3.7x	
R504	2001-001062	R-CARBON(S);10Mohm,5%,1/2W,AA,TP,2.4x6.4	
R505	2008-001011	R-FUSIBLE(S);0.18ohm,10%,2W,AF,TP,3.9x10	
R510	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R511	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R512	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R603	2001-000241	R-CARBON;1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R604	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R605	2001-000522	R-CARBON;22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R606	2001-000605	R-CARBON;3.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R610	2001-000522	R-CARBON;22Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R611	2001-000605	R-CARBON;3.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R701	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R703	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R705	2001-000003	R-CARBON;330ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R706	2001-000221	R-CARBON;1.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R713	2004-001027	R-METAL;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R714	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R715	2004-001027	R-METAL;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R717	2004-001027	R-METAL;5.6Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R801	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
R802	2003-000994	R-METAL OXIDE(S);33Kohm,5%,2W,AF,TP,3.9x	
R803	2004-001373	R-METAL(S);100Kohm,1%,1/2W,AA,TP,2.4x6.4	
R805	2004-001967	R-METAL(S);68Kohm,1%,1/2W,AA,TP,6.5x2.5m	
R806	2002-000328	R-COMPOSITION;3.3Mohm,10%,1/2W,AA,TP,3.5	

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R807	2002-000328	R-COMPOSITION;3.3Mohm,10%,1/2W,AA,TP,3.5	
R809	2001-000622	R-CARBON;300Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R810	2003-001090	R-METAL OXIDE(S);10Kohm,5%,2W,AF,TP,4x12	
R811	2003-000784	R-METAL OXIDE(S);7.5Kohm,5%,2W,AF,TP,4x1	
R812	2008-000299	R-FUSIBLE(S);47ohm,5%,2W,AF,TP,3.9x10mm	
R813	2008-000299	R-FUSIBLE(S);47ohm,5%,2W,AF,TP,3.9x10mm	
R814	2008-000189	R-FUSIBLE;0.47ohm,10%,2W,AA,TP,6x15.5mm	
R815	2008-000189	R-FUSIBLE;0.47ohm,10%,2W,AA,TP,6x15.5mm	
R816	2004-004089	R-METAL;123Kohm,1%,1/2W,AA,TP,2.5x6.5m	
R817	2004-001983	R-METAL;2.49Kohm,1%,1/2W,AA,TP,2.4x6.4	
R818	2001-001050	R-CARBON(S);1.5Kohm,5%,1/2W,AA,TP,2.4x6.	
R819	2001-001088	R-CARBON(S);1Kohm,5%,1/2W,AA,TP,2.4x6.4m	
R820	2008-001062	R-FUSIBLE;39ohm,5%,2W,AF,TP,3.9x10mm	
R822	2001-001150	R-CARBON(S);470Kohm,5%,1/2W,AA,TP,2.4x6.	
R823	2001-001150	R-CARBON(S);470Kohm,5%,1/2W,AA,TP,2.4x6.	
R824	2009-000022	R-METAL PLATE;0.47ohm,10%,5W,CL,TP,5x14x	
R901	2001-000793	R-CARBON;47ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R902	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R903	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R904	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R905	2001-000241	R-CARBON;1.5Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R906	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R907	2001-000449	R-CARBON;2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R908	2001-000449	R-CARBON;2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R909	2001-000591	R-CARBON;3.3Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R912	2004-001193	R-METAL;680ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R913	2004-001193	R-METAL;680ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R919	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R920	2004-001104	R-METAL;56Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R921	2001-001062	R-CARBON(S);10Mohm,5%,1/2W,AA,TP,2.4x6.4	
R922	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R923	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R924	2001-000449	R-CARBON;2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R925	2001-000449	R-CARBON;2.2Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R926	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R927	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R928	2001-000066	R-CARBON(S);10Kohm,5%,1/2W,AA,TP,2.4x6.4	
R929	2004-000253	R-METAL;11Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
R930	2004-000218	R-METAL;10Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
R931	2004-000218	R-METAL;10Kohm,1%,1/8W,AA,TP,1.8x3.2mm	
R935	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R936	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R937	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R939	2001-000006	R-CARBON;2.4Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R944	2001-000006	R-CARBON;2.4Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R951	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R952	2001-000281	R-CARBON;100ohm,5%,1/8W,AA,TP,1.8x3.2mm	
R954	2001-000006	R-CARBON;2.4Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R956	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
R958	2001-000780	R-CARBON;470 OHM,5%,1/8W,AA,T	
R959	2001-000800	R-CARBON;5.1Kohm,5%,1/8W,AA,TP,1.8x3.2m	
R960	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
R962	2001-000273	R-CARBON;100Kohm,5%,1/8W,AA,TP,1.8x3.2m	
RL901	AA59-60001U	MODULE-REMOCON;-,ORC-50VF/SR-12V,38KHz,9	
RT01	2001-000563	R-CARBON;27Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RT02	2001-000577	R-CARBON;2KOHM,5%,1/8W,AA,TP,	
RT03	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RT04	2008-001062	R-FUSIBLE;39ohm,5%,2W,AF,TP,3.9x10mm	
RT05	2001-000290	R-CARBON;10K OHM,5%,1/8W,AA,T	
RT06	2001-000362	R-CARBON;150ohm,5%,1/8W,AA,TP,1.8x3.2mm	
RT09	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
RT13	2001-000734	R-CARBON;4.7Kohm,5%,1/8W,AA,TP,1.8x3.2m	
RW701	2011-001133	R-NETWORK;33K/24K/75x3,5%,1/8W,X,SIP,6P,	
RW702	2011-001098	R-NETWORK;75/75/1K/75ohm,5%,-,-,PLCC,5P,	
RW901	2011-000531	R-NETWORK;4.7Kohm,5%,1/8W,A,SIP,8P,TP	
RX801	2002-000328	R-COMPOSITION;3.3Mohm,10%,1/2W,AA,TP,3.5	
SFN02	2904-001063	FILTER-SAW AV;38.9MHz,SIP5K,TP,17dB,PAL-	
SW801	3403-000179	SWITCH-PUSH;250V,5A,DPST,-,JPW-2104B	
SW901	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
SW902	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
SW903	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
SW904	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
SW905	3404-000244	SWITCH-TACT;15V,20mA,90-170gf,7.5x7mm,SP	
⚠ T201	AA26-10005G	TRANS-IF;-,7MG,VIF,150NH,-,-,38.8MHZ,ST	
⚠ T401	AA26-50001B	HORIZ.DRIVE;-,7.1MH,102UH,10-20UH,YL081,	
⚠ T444	AA26-30001Y	TRANS-FLYBACK;-,FSV-20A001,20,125V	
⚠ T801	AA26-20006U	TRANS-SWITCHING;-,90-260V,125V/12.5V,EN,	
⚠ TU01	AA40-10003N	TUNER-V/S;-,TECC0985VD28A,PAL-B/G,TR,105	

Loc. No.	Code No.	Description ; Specification	Remark
TUBE	AA39-20567A	LEAD CONNECTOR-ASSY;-,TUBE,7####,-,25mm,	
⚠ V999	3704-000110	SOCKET-CRT;14P,29.1,25.5,SN,ISHS09S/BK	
X202	2801-000226	CRYSTAL-UNIT;3.579545MHz,20ppm,28-AAM,15	
X203	2801-000274	CRYSTAL-UNIT;4.433619MHZ,30PPM,28-AAM,20	
X901	2801-001476	CRYSTAL-UNIT;12.0MHz,50ppm,28-ABQ,S,30oh	
Z201	2903-000199	FILTER-CERAMIC;TR,6.5MHz,70KHz,-,-,TP,-	
Z202	2903-000181	FILTER-CERAMIC;TR,5.5MHz,-,-,-,TP,TPS5.5	
Z204	2903-000184	FILTER-CERAMIC;BP,5.5MHz,+-60KHz,6dB,-,T	
Z205	2903-000200	FILTER-CERAMIC;BP,6.5MHz,+-70KHz,6dB,-,T	
Z206	2903-000184	FILTER-CERAMIC;BP,5.5MHz,+-60KHz,6dB,-,T	

ASSY-PCB,SECAM

Loc. No.	Code No.	Description ; Specification	Remark
*	AA95-90017S	ASSY-PCB,SECAM;-,-,SCT13B,CS,CK,-,-	
C217	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C218	2202-000796	C-CERAMIC,MLC-AXIAL;UP050 B102KB INF,10%	
C220	2401-001495	C-AL;47uF,20%,16V,GP,5x11mm,5mm,TP	
C241	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C242	2305-000288	C-FILM,MPEF;220nF,5%,50V,TP,7.3x4.8x5.5m	
C243	2401-001495	C-AL;47uF,20%,16V,GP,5x11mm,5mm,TP	
C244	2305-000665	C-FILM,MPEF;100nF,5%,63V,TP,7.5x4.0x5.0m	
C245	2202-000109	C-CERAMIC,MLC-AXIAL;100nF,+80-20%,50V,Y5	
CN202	3711-002707	CONNECTOR-HEADER;NOWALL,9P,1R,2.5mm,ANGL	
DZ202	0403-000296	DIODE-ZENER;MTZ5.6B,5.6V,5.45-5.73V,500m	
IC202	1209-000214	IC-DELAY LINE;TDA4665,DIP,16P,300MIL,PLA	
IC203	1204-000524	IC-DECODER;TDA8395P/N1,DIP,16P,-,PLASTIC	
L201	2701-000114	INDUCTOR-AXIAL;10uH,10%,2.5x3.4mm	
R233	2001-001077	R-CARBON(S);150ohm,5%,1/2W,AA,TP,2.4x6.4	

ASSY-PCB FRONT A/V

Loc. No.	Code No.	Description ; Specification	Remark
*	AA95-90018U	ASSY-PCB FRONT A/V;-,39,85,SCT13B,MULTI,	
CE01	2401-001840	C-AL;100uF,20%,16V,GP,TP,6.3x11,5mm	
CE03	2401-001264	C-AL;4.7uF,20%,50V,BP,TP,5X11,5MM	
CE06	2202-000862	C-CERAMIC,MLC-AXIAL;390pF,10%,50V,Y5P,TP	
CE07	2202-000222	C-CERAMIC,MLC-AXIAL;3.3nF,20%,16V,Y5P,TP	
CN702	AA39-20461C	LEAD CONNECTOR-ASSY;-,YBNH250-11,67096-0	
JA702	3722-000506	JACK-RCA;2P,3.6MM,-,AG	
JE601	3722-000143	JACK-PHONE;1P(VER),3.4mm,AG,BLK,NO	
QE01	0501-000283	TR-SMALL SIGNAL;KSA539,PNP,400mW,TO-92,T	
RE01	2001-001153	R-CARBON(S);47ohm,5%,1/2W,AA,TP,2.4x6.4m	
RE02	2001-001153	R-CARBON(S);47ohm,5%,1/2W,AA,TP,2.4x6.4m	
RE03	2004-001201	R-METAL;68Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RE04	2001-000429	R-CARBON;1Kohm,5%,1/8W,AA,TP,1.8x3.2mm	
RE05	2001-000009	R-CARBON;20Kohm,5%,1/8W,AA,TP,1.8x3.2mm	

ASSY-POWER,CORD

Loc. No.	Code No.	Description ; Specification	Remark
⚠	AA39-10001G	POWER-CORD;-,KKP-419C,KLCE-2F,2.286M,HOU	
	AA61-20070A	HOLDER-CORD;-,-,PP,V0,BLK,KE-0002	

REMOCON

Loc. No.	Code No.	Description ; Specification	Remark
*	AA59-10076M	REMOCON;-,TM48,SPM153,39,L/GRY,SS	

ASSY-HOLDER,SPK

Loc. No.	Code No.	Description ; Specification	Remark
*	AA91-60028A	ASSY-HOLDER,SPK;-,ABS,-,-,80HM 5W,5085	

ASSY-CRT

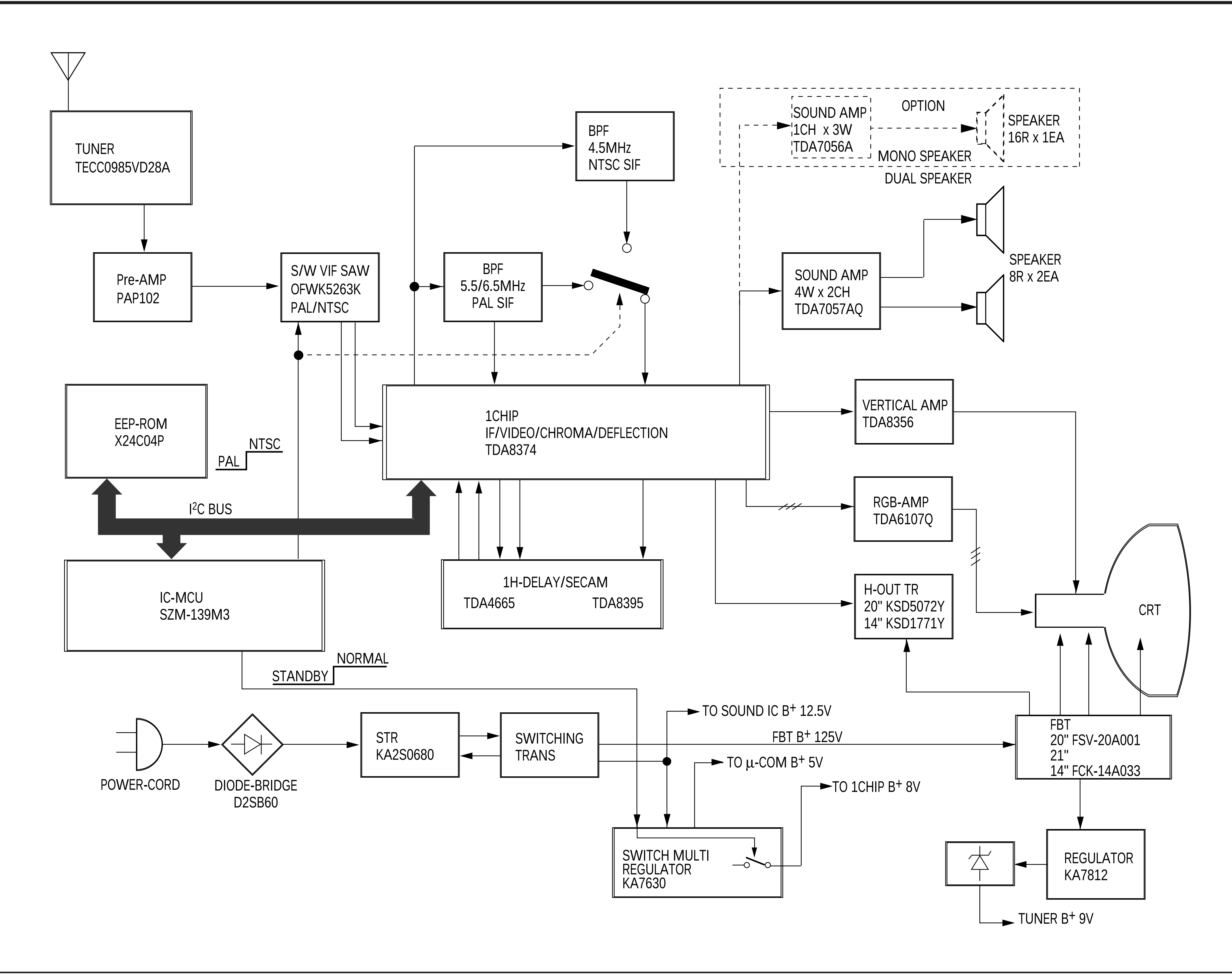
Loc. No.	Code No.	Description ; Specification	Remark
⚠	AA03-10003L	CRT-COLOR;-,A48KRD82X(U),+380MG,20,90DE	
⚠	AA27-50001S	DEFLECTION-YOKE;-,DSE-1992LL(1),20/A48K	
	AA27-60001K	MAGNET-CONVERGENCE;-,NY-291,29.1MM	
	AA63-60028A	SPACER-DY;NEOPRENE,-,BLK,V0 W12,-,-	

ASSY-ACCESSORY

Loc. No.	Code No.	Description ; Specification	Remark
	AA26-90001C	TRANS-MATCHING;-,300ohm/75ohm,PAL,40-890	
	AA42-10001V	ANT-ROD;-,3S,620mm,BRN,UL/CSA	
	AA68-11139A	MANUAL-USERS;SCT13B,RUSSIAN,TM48,B5,W/P	
	AA68-11169A	MANUAL-USERS;SCT13B,N-RUS,TM48,B5,W/P	

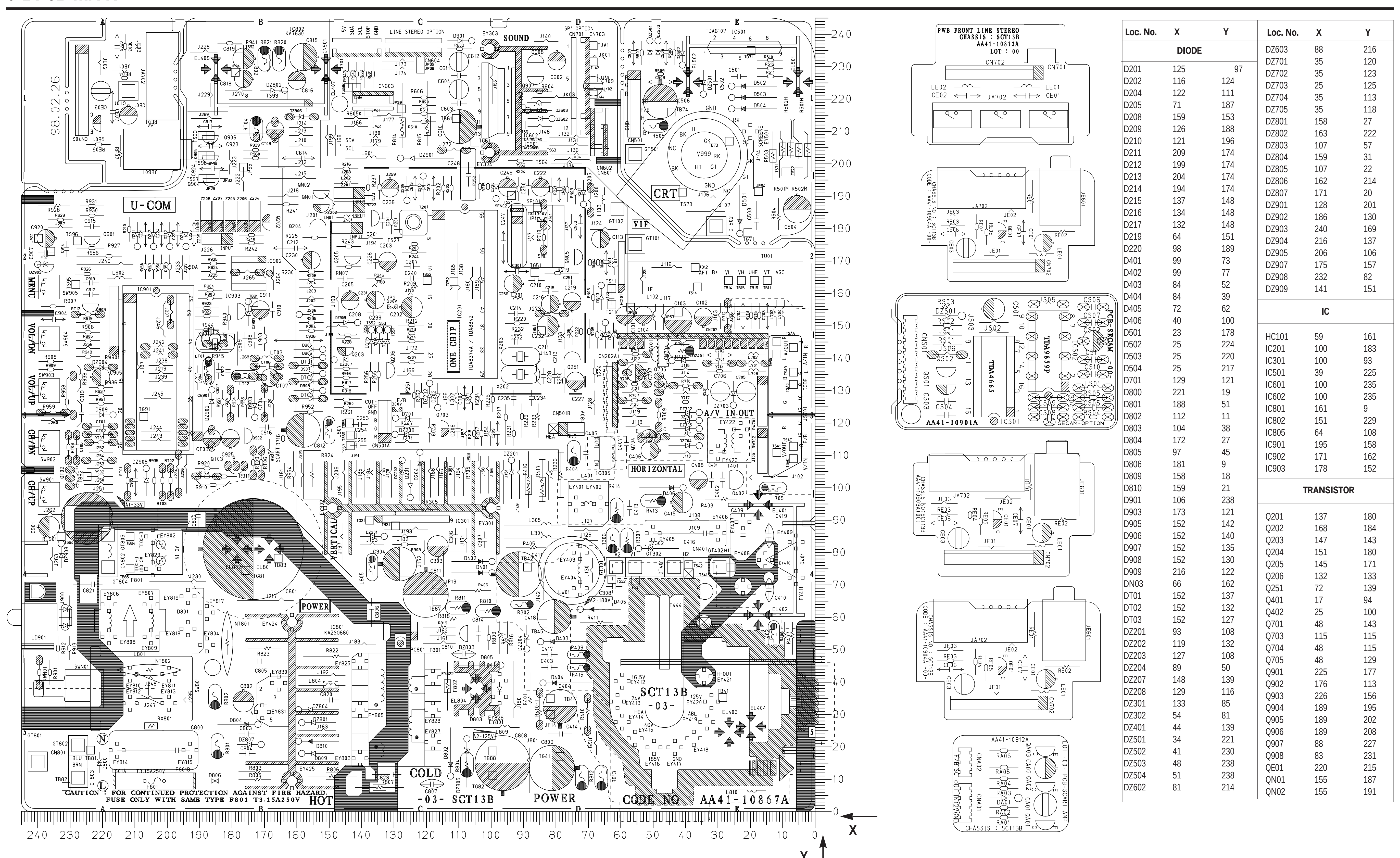
8. Block Diagram

8-1 SCT13B



9. PCB Layout

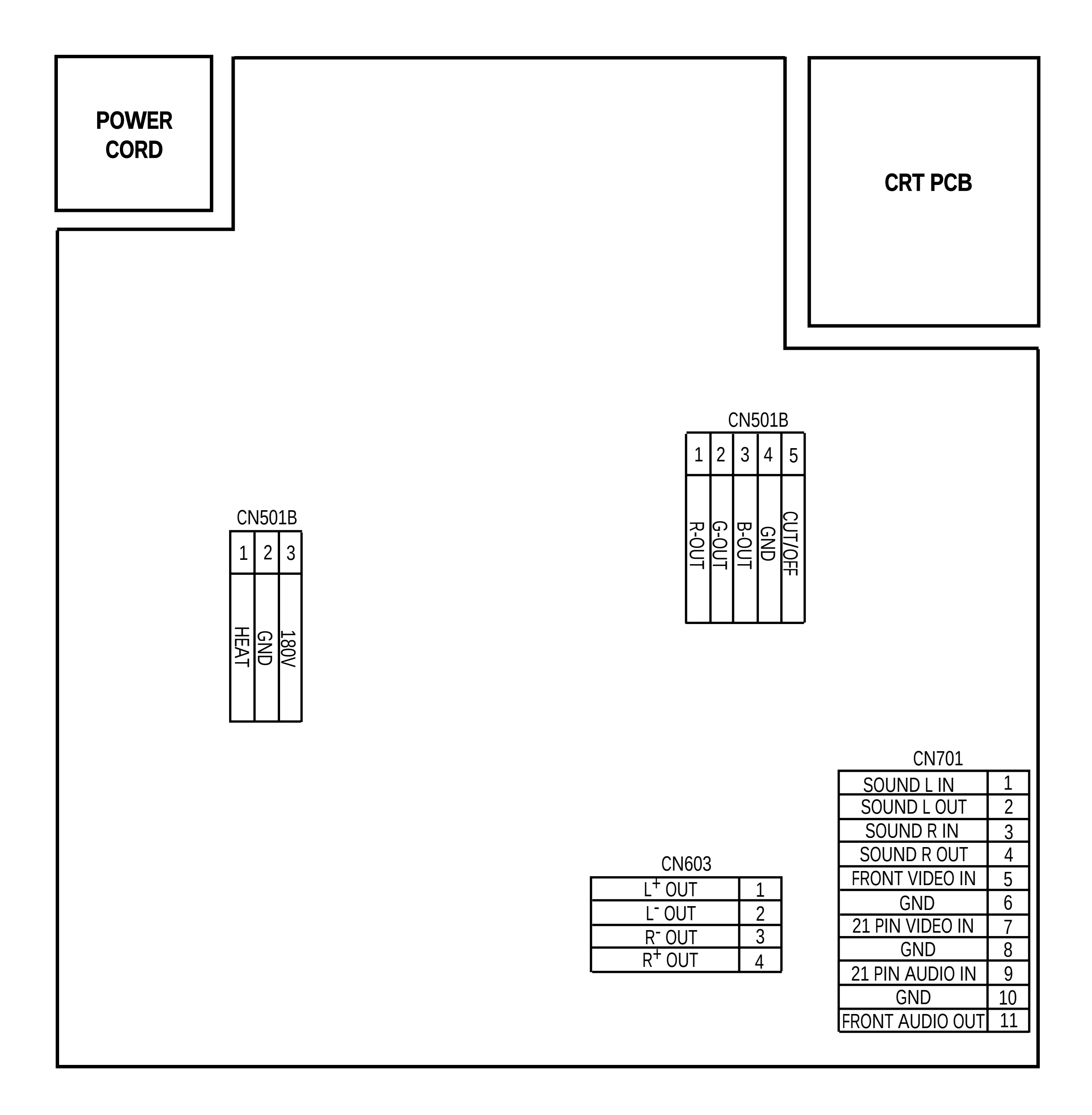
9-1 PCB MAIN



Loc. No.	X	Y
DIODE		
D201	125	97
D202	116	124
D204	122	111
D205	71	187
D208	159	153
D209	126	188
D210	121	196
D211	209	174
D212	199	174
D213	204	174
D214	194	174
D215	137	148
D216	134	148
D217	132	148
D219	64	151
D220	98	189
D401	99	73
D402	99	77
D403	84	52
D404	84	39
D405	72	62
D406	40	100
D501	23	178
D502	25	224
D503	25	220
D504	25	217
D701	129	121
D800	221	19
D801	188	51
D802	112	11
D803	104	38
D804	172	27
D805	97	45
D806	181	9
D809	158	18
D810	159	21
D901	106	238
D903	173	121
D905	152	142
D906	152	140
D907	152	135
D908	152	130
D909	216	122
DN03	66	162
DT01	152	137
DT02	152	132
DT03	152	127
DZ201	93	108
DZ202	119	132
DZ203	127	108
DZ204	89	50
DZ207	148	139
DZ208	129	116
DZ301	133	85
DZ302	54	81
DZ401	44	139
DZ501	34	221
DZ502	41	230
DZ503	48	238
DZ504	51	238
DZ602	81	214
DZ603	88	216
DZ701	35	120
DZ702	35	123
DZ703	25	125
DZ704	35	113
DZ705	35	118
DZ801	158	27
DZ802	163	222
DZ803	107	57
DZ804	159	31
DZ805	107	22
DZ806	162	214
DZ807	171	20
DZ901	128	201
DZ902	186	130
DZ903	240	169
DZ904	216	137
DZ905	206	106
DZ907	175	157
DZ908	232	82
DZ909	141	151
IC		
HC101	59	161
IC201	100	183
IC301	100	93
IC501	39	225
IC601	100	235
IC602	100	235
IC801	161	9
IC802	151	229
IC805	64	108
IC901	195	158
IC902	171	162
IC903	178	152
TRANSISTOR		
Q201	137	180
Q202	168	184
Q203	147	143
Q204	151	180
Q205	145	171
Q206	132	133
Q251	72	139
Q401	17	94
Q402	25	100
Q701	48	143
Q703	115	115
Q704	48	115
Q705	48	129
Q901	225	177
Q902	176	113
Q903	226	156
Q904	189	195
Q905	189	202
Q906	189	208
Q907	88	227
Q908	83	231
QE01	220	215
QN01	155	187
QN02	155	191

10. Wiring Diagram

10-1 SCT13B



MEMO

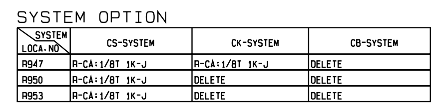
11. Schematic Diagrams

11-1 TTX Micom



MICOM OPTION

MICOM / LOC	NON TTX u-COM		TTX u-COM	
	CODE-NO	SPEC	CODE-NO	SPEC
C908	2201-000193	C-C : 10PF 50V CH	2201-000980	C-C : 30PF 50V CH
C909	2201-000573	C-C : 47PF 50V CH	2201-000980	C-C : 30PF 50V CH
C919	2202-000796	C-AXIAL: 1NF 50V	DELETE	DELETE
C922	2305-000665	C-FILM: 104 63V	DELETE	DELETE
C925	2401-001495	C-AL: 47UF 16V	DELETE	DELETE
CT01	DELETE	DELETE	2202-000109	C-AXIAL: 104 50V
CT02	DELETE	DELETE	2202-000109	C-AXIAL: 104 50V
CT03	DELETE	DELETE	2401-001495	C-AL: 47UF 16V
CT04	DELETE	DELETE	2202-000109	C-AXIAL: 104 50V
CT06	DELETE	DELETE	2202-000109	C-AXIAL: 104 50V
CT07	DELETE	DELETE	2401-001495	C-AL: 47UF 16V
D905	0401-000005	DIODE 1N4148	2001-000429	R-CARBON: 1K 1/8W
D906	0401-000005	DIODE 1N4148	DELETE	DELETE
D907	0401-000005	DIODE 1N4148	DELETE	DELETE
D908	0401-000005	DIODE 1N4148	DELETE	DELETE
IC901	-	SZM193	-	SPM-197
IC903	1203-000515	KIA7042P-AT	1203-000641	KIA7442P-AT
J111	DELETE	DELETE	3812-000219	JUMPER
J184	3812-000219	JUMPER	2001-000857	R-CARBON:560 1/8W
J185	3812-000219	JUMPER	2001-000857	R-CARBON:560 1/8W
J191	3812-000219	JUMPER	2001-000857	R-CARBON:560 1/8W
J224	DELETE	DELETE	3812-000219	JUMPER
J234	DELETE	DELETE	3812-000219	JUMPER
J237	DELETE	DELETE	3812-000219	JUMPER
J239	3812-000219	JUMPER	DELETE	DELETE
J246	3812-000219	JUMPER	DELETE	DELETE
J254	DELETE	DELETE	3812-000219	JUMPER
J264	3812-000219	JUMPER	DELETE	DELETE
J265	DELETE	DELETE	3812-000219	JUMPER
LT01	DELETE	DELETE	2901-000297	FERRITE-BEAD
LT02	DELETE	DELETE	2901-000297	FERRITE-BEAD
LT03	DELETE	DELETE	2701-000114	COIL AL02 10uH
Q704	DELETE	DELETE	0501-000283	KSA539
QT02	DELETE	DELETE	0501-000389	KSC815-Y
QT03	DELETE	DELETE	0504-000123	KSR1010
R906	2001-000472	R-CARBON:2.7K 1/8W	2001-000290	R-CARBON:10K 1/8W
R907	2004-001291	R-CARBON:820 1/8W	2001-000449	R-CARBON:2.2K 1/8W
R908	2001-000214	R-CARBON:1.1K 1/8W	2001-000449	R-CARBON:2.2K 1/8W
R909	2001-000449	R-CARBON:2.2K 1/8W	2001-000591	R-CARBON:3.3K 1/8W
R910	2001-000290	R-CARBON:10K 1/8W	DELETE	DELETE
R916	2001-000281	R-CA:1/8T 68K-J	DELETE	DELETE
R917	2001-000281	R-CA:1/2T 10M-J	DELETE	DELETE
R918	2001-000281	R-CA:1/8T 510-J	DELETE	DELETE
R934	2001-000449	R-CARBON:2.2K 1/8W	3812-000212	JUMPER
R938	2001-000472	R-CARBON:2.7K 1/8W	DELETE	DELETE
R940	2001-001234	R-CARBON:75K 1/8W	DELETE	DELETE
R944	2004-001201	R-CARB:68K 1/8W	2001-000006	R-CARB:2.4K 1/8W
R945	2001-001062	R-CARB:10M 1/8W	DELETE	DELETE
R948	2001-000241	R-CARB:1.K 1/8W	DELETE	DELETE
R955	2001-000429	R-CARB:1K 1/8W	DELETE	DELETE
R957	2001-000832	R-CARB:510 1/8W	DELETE	DELETE
R958	DELETE	DELETE	2001-000793	R-CARB:470 1/8W
R959	DELETE	DELETE	2001-000800	R-CARB:5.1K 1/8W
RT01	DELETE	DELETE	2001-000563	R-CARB:27K 1/8W
RT02	DELETE	DELETE	2001-000577	R-CARB:2K 1/8W
RT03	DELETE	DELETE	2001-000429	R-CARB:1K 1/8W
RT04	DELETE	DELETE	2008-001062	R-FUSIBLE:39 2W
RT05	DELETE	DELETE	2001-000290	R-CARB:10K 1/8W
RT06	3812-000219	JUMPER	2001-000362	R-CARB:150 1/8W
RT08	DELETE	DELETE	3812-000219	JUMPER
RT09	DELETE	DELETE	2001-000734	R-CARB:4.7K 1/8W
RT13	DELETE	DELETE	2001-000734	R-CARB:4.7K 1/8W
DT01	DELETE	DELETE	0401-00005	DIODE 1N4148
DT02	DELETE	DELETE	0401-00005	DIODE 1N4148
DT03	DELETE	DELETE	0401-00005	DIODE 1N4148
X901	2801-003224	32.768KHz	2801-001476	12MHz
R820	2008-000299	R-FUSIBLE 47 2W	2008-001062	R-FUSIBLE 2W 39
R821	2008-000264	R-FUSIBLE 1 1W	DELETE	DELETE
J802	DELETE	DELETE	3812-000219	JUMPER
DZ805	DELETE	DELETE	2003-000706	R-METAL 47K 2W AA
DZ806	DELETE	DELETE	0403-000295	DIODE MTZ5.1B
R406	2001-0001410	R-CARBON 43 1/2W	2001-001126	R-CARB 300 1/2W



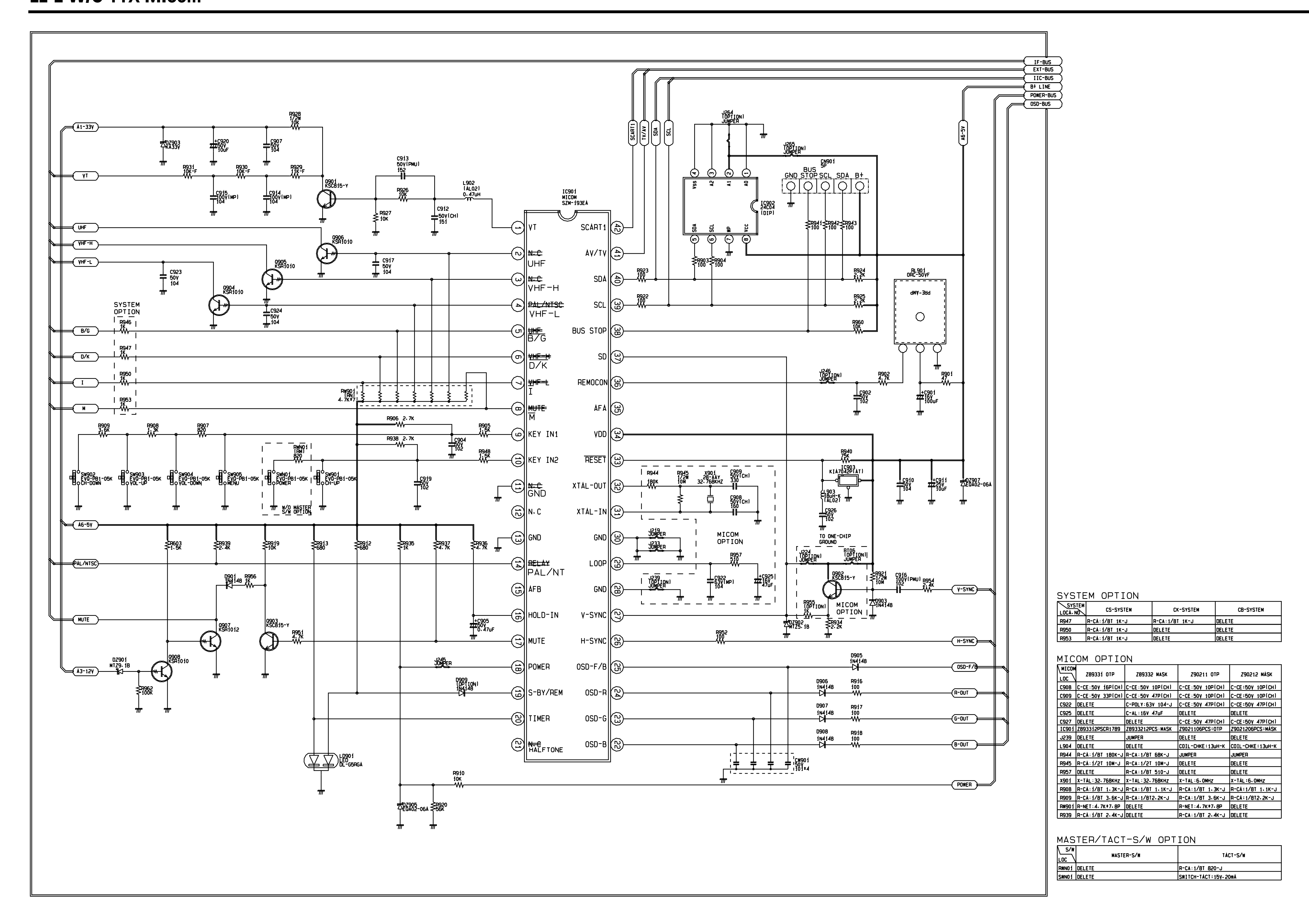
SYSTEM OPTION

SYSTEM / LOCA.NO	CS-SYSTEM	CK-SYSTEM	CB-SYSTEM
R947	R-CA:1/8T 1K-J	R-CA:1/8T 1K-J	DELETE
R950	R-CA:1/8T 1K-J	DELETE	DELETE
R953	R-CA:1/8T 1K-J	DELETE	DELETE

MASTER/TACT-S/W OPTION

S/W / LOC	MASTER-S/W	TACT-S/W
RWN01	DELETE	R-CA:1/8T 820-J
SWN01	DELETE	SWITCH-TACT:15V.20mA

11-2 W/O TTX Micom



SYSTEM OPTION

SYSTEM / LOCA.NO	CS-SYSTEM	CK-SYSTEM	CB-SYSTEM
R947	R-CA:1/8T 1K-J	R-CA:1/8T 1K-J	DELETE
R950	R-CA:1/8T 1K-J	DELETE	DELETE
R953	R-CA:1/8T 1K-J	DELETE	DELETE

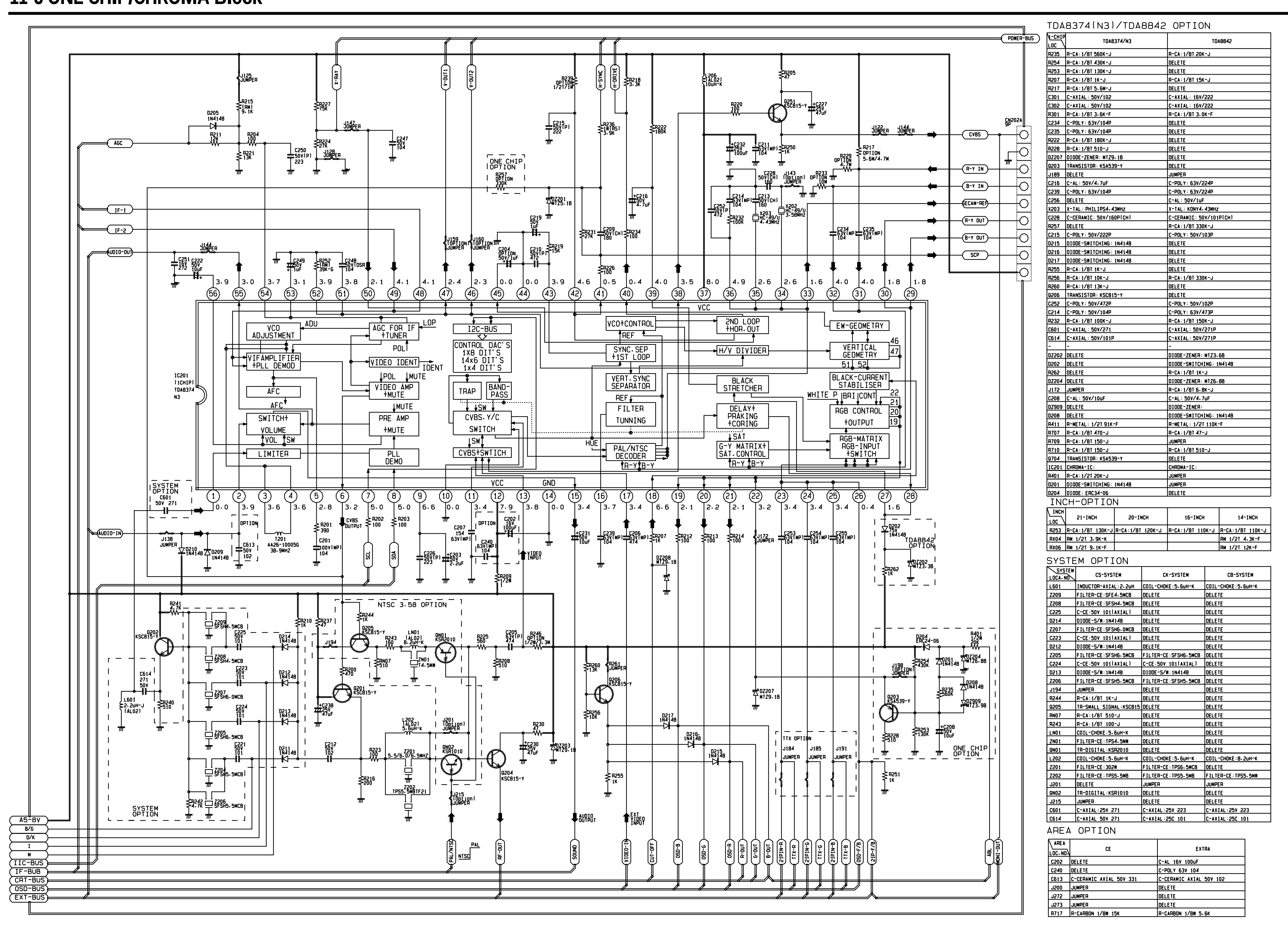
MICOM OPTION

MICOM / LOC	Z89331 OTP	Z89332 MASK	Z90211 OTP	Z90212 MASK
C908	C-CE:50V 16P(CH)	C-CE:50V 10P(CH)	C-CE:50V 10P(CH)	C-CE:50V 10P(CH)
C909	C-CE:50V 33P(CH)	C-CE:50V 47P(CH)	C-CE:50V 10P(CH)	C-CE:50V 10P(CH)
C922	DELETE	C-POLY:63V 104-J	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)
C925	DELETE	C-AL:16V 47uF	DELETE	DELETE
C927	DELETE	DELETE	C-CE:50V 47P(CH)	C-CE:50V 47P(CH)
IC901	Z893312PSCR1789	Z8933212PCS:MASK	Z9021106PCS:OTP	Z9021206PCS:MASK
J239	DELETE	JUMPER	DELETE	DELETE
L904	DELETE	DELETE	COIL-CHKE:13uH-K	COIL-CHKE:13uH-K
R944	R-CA:1/8T 180K-J	R-CA:1/8T 68K-J	JUMPER	JUMPER
R945	R-CA:1/2T 10M-J	R-CA:1/2T 10M-J	DELETE	DELETE
R957	DELETE	R-CA:1/8T 510-J	DELETE	DELETE
X901	X-TAL:32.768KHZ	X-TAL:32.768KHZ	X-TAL:6.0MHZ	X-TAL:6.0MHZ
R908	R-CA:1/8T 1.3K-J	R-CA:1/8T 1.1K-J	R-CA:1/8T 1.3K-J	R-CA:1/8T 1.1K-J
R909	R-CA:1/8T 3.6K-J	R-CA:1/8T2.2K-J	R-CA:1/8T 3.6K-J	R-CA:1/8T2.2K-J
RW901	R-NET:4.7K*7.8P	DELETE	R-NET:4.7K*7.8P	DELETE
R939	R-CA:1/8T 2.4K-J	DELETE	R-CA:1/8T 2.4K-J	DELETE

MASTER/TACT-S/W OPTION

S/W / LOC	MASTER-S/W	TACT-S/W
RWN01	DELETE	R-CA:1/8T 820-J
SWN01	DELETE	SWITCH-TACT:15V.20mA

11-3 ONE CHIP/CHROMA Block



TDA8374(N3)/TDA8842 OPTION

1-CHIP / LOC	TDA8374/N3	TDA8842
R235	R-CA:1/8T 560K-J	R-CA:1/8T 20K-J
R254	R-CA:1/8T 430K-J	DELETE
R253	R-CA:1/8T 130K-J	DELETE
R207	R-CA:1/8T 1K-J	R-CA:1/8T 15K-J
R217	R-CA:1/8T 5.6M-J	DELETE
C301	C-AXIAL: 50V/102	C-AXIAL: 16V/222
C302	C-AXIAL: 50V/102	C-AXIAL: 16V/222
R301	R-CA:1/8T 3.6K-F	R-CA:1/8T 3.0K-F
C234	C-POLY: 63V/104P	DELETE
C235	C-POLY: 63V/104P	DELETE
R222	R-CA:1/8T 180K-J	DELETE
R228	R-CA:1/8T 510-J	DELETE
DZ207	DIODE-ZENER: MTZ9.1B	DELETE
Q203	TRANSISTOR: KSA539-Y	DELETE
J189	DELETE	JUMPER
C216	C-AL: 50V/4.7uF	C-POLY: 63V/224P
C239	C-POLY: 63V/104P	C-POLY: 63V/224P
C256	DELETE	C-AL: 50V/1uF
X203	X-TAL: PHILIPS4.43MHz	X-TAL: KONY4.43MHz
C228	C-CERAMIC: 50V/160P(CH)	C-CERAMIC: 50V/101P(CH)
R257	DELETE	R-CA:1/8T 330K-J
C215	C-POLY: 50V/222P	C-POLY: 50V/103P
D215	DIODE-SWITCHING: 1N4148	DELETE
D216	DIODE-SWITCHING: 1N4148	DELETE
D217	DIODE-SWITCHING: 1N4148	DELETE
R255	R-CA:1/8T 1K-J	DELETE
R256	R-CA:1/8T 10K-J	R-CA:1/8T 330K-J
R260	R-CA:1/8T 13K-J	DELETE
Q206	TRANSISTOR: KSC815-Y	DELETE
C252	C-POLY: 50V/472P	C-POLY: 50V/102P
C214	C-POLY: 50V/104P	C-POLY: 63V/473P
R232	R-CA:1/8T 100K-J	R-CA:1/8T 150K-J
C601	C-AXIAL: 50V/271	C-AXIAL: 50V/271P
C614	C-AXIAL: 50V/101P	C-AXIAL: 50V/271P
-	-	-
DZ202	DELETE	DIODE-ZENER: MTZ3.6B
D202	DELETE	DIODE-SWITCHING: 1N4148
R262	DELETE	R-CA:1/8T 1K-J
DZ204	DELETE	DIODE-ZENER: MTZ6.8B
J172	JUMPER	R-CA:1/8T 6.8K-J
C208	C-AL: 50V/10uF	C-AL: 50V/4.7uF
DZ909	DELETE	DIODE-ZENER:
D208	DELETE	DIODE-SWITCHING: 1N4148
R411	R-METAL: 1/2T 91K-F	R-METAL: 1/2T 110K-F
R707	R-CA:1/8T 470-J	R-CA:1/8T 47-J
R709	R-CA:1/8T 150-J	JUMPER
R710	R-CA:1/8T 150-J	R-CA:1/8T 510-J
Q704	TRANSISTOR: KSA539-Y	DELETE
IC201	CHROMA-IC:	CHROMA-IC:
R401	R-CA:1/2T 20K-J	JUMPER
D201	DIODE-SWITCHING: 1N4148	JUMPER
D204	DIODE: ERC34-06	DELETE

INCH-OPTION

INCH / LOC	21-INCH	20-INCH	16-INCH	14-INCH
R253	R-CA:1/8T 130K-J	R-CA:1/8T 120K-J	R-CA:1/8T 110K-J	R-CA:1/8T 110K-J
RX04	RM 1/2T 3.9K-K			RM 1/2T 4.3K-F
RX06	RM 1/2T 9.1K-F			RM 1/2T 12K-F

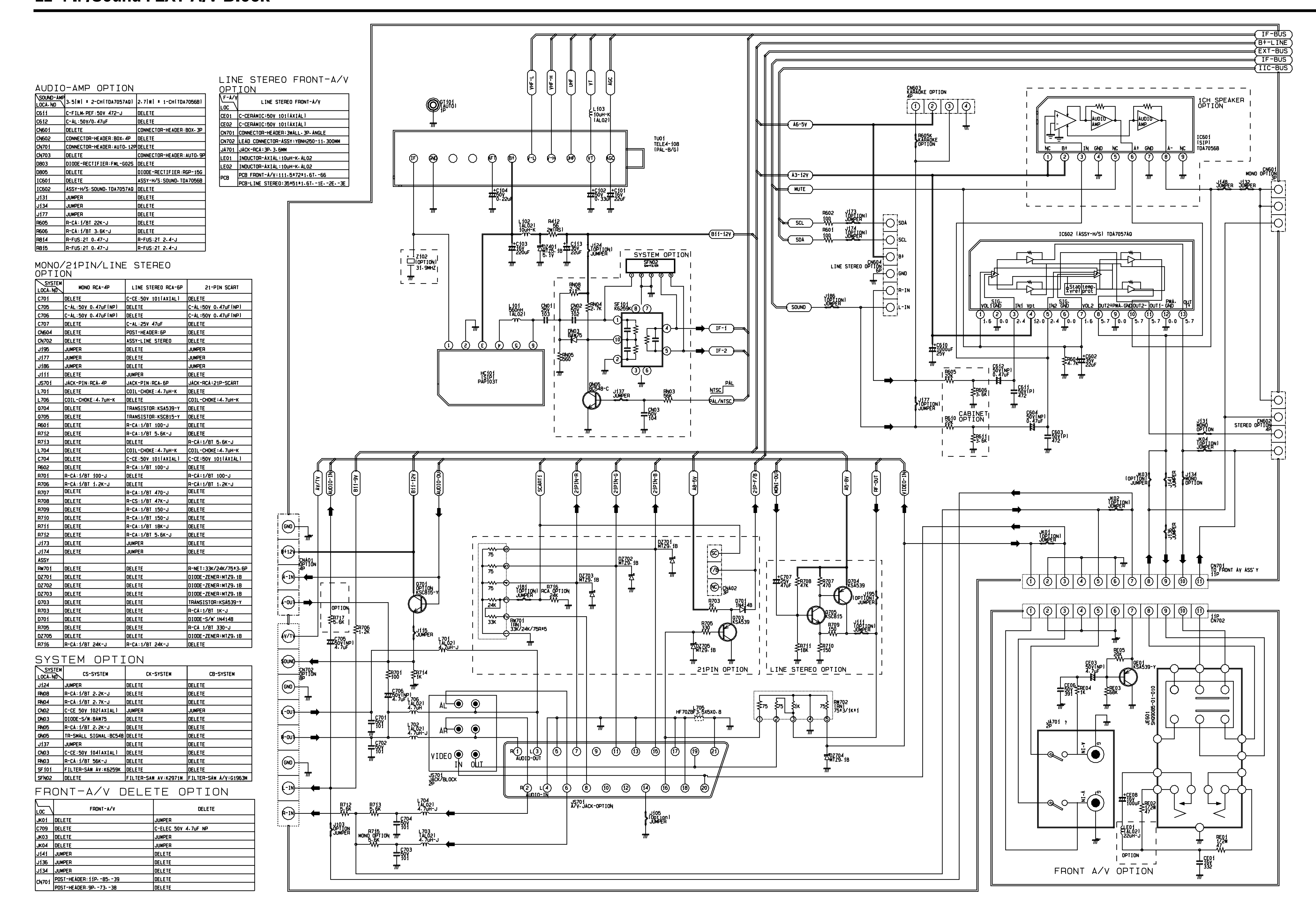
SYSTEM OPTION

SYSTEM / LOCA.NO	CS-SYSTEM	CK-SYSTEM	CB-SYSTEM
L601	INDUCTOR-AXIAL:2.2uH	COIL-CHOKE:5.6uH-K	COIL-CHOKE:5.6uH-K
Z209	FILTER-CE:SFE4.5MCB	DELETE	DELETE
Z208	FILTER-CE:SFSH4.5MCB	DELETE	DELETE
C225	C-CE:50V 101(AXIAL)	DELETE	DELETE
D214	DIODE-S/W:1N4148	DELETE	DELETE
Z207	FILTER-CE:SFSH6.0MCB	DELETE	DELETE
C223	C-CE:50V 101(AXIAL)	DELETE	DELETE
D212	DIODE-S/W:1N4148	DELETE	DELETE
Z205	FILTER-CE:SFSH6.5MCB	FILTER-CE:SFSH6.5MCB	DELETE
C224	C-CE:50V 101(AXIAL)	C-CE:50V 101(AXIAL)	DELETE
D213	DIODE-S/W:1N4148	DIODE-S/W:1N4148	DELETE
Z206	FILTER-CE:SFSH5.5MCB	FILTER-CE:SFSH5.5MCB	DELETE
J194	JUMPER	DELETE	DELETE
R244	R-CA:1/8T 1K-J	DELETE	DELETE
Q205	TR-SMALL SIGNAL:KSC815	DELETE	DELETE
RN07	R-CA:1/8T 510-J	DELETE	DELETE
R243	R-CA:1/8T 100-J	DELETE	DELETE
LN01	COIL-CHOKE:5.6uH-K	DELETE	DELETE
ZN01	FILTER-CE:TPS4.5MW	DELETE	DELETE
QN01	TR-DIGITAL:KSR2010	DELETE	DELETE
L202	COIL-CHOKE:5.6uH-K	COIL-CHOKE:5.6uH-K	COIL-CHOKE:8.2uH-K
Z201	FILTER-CE:302W	FILTER-CE:TPS6.5MCB	DELETE
Z202	FILTER-CE:TPS5.5MB	FILTER-CE:TPS5.5MB	FILTER-CE:TPS5.5MW
J201	DELETE	JUMPER	JUMPER
QN02	TR-DIGITAL:KSR1010	DELETE	DELETE
J215	JUMPER	DELETE	DELETE
C601	C-AXIAL:25V 271	C-AXIAL:25V 223	C-AXIAL:25V 223
C614	C-AXIAL 50V 271	C-AXIAL:25C 101	C-AXIAL:25C 101

AREA OPTION

AREA / LOC.NO.	CE	EXTRA
C202	DELETE	C-AL 16V 100uF
C240	DELETE	C-POLY 63V 104
C613	C-CERAMIC AXIAL 50V 331	C-CERAMIC AXIAL 50V 102
J200	JUMPER	DELETE
J272	JUMPER	DELETE
J273	JUMPER	DELETE
R717	R-CARBON 1/8W 15K	R-CARBON 1/8W 5.6K

11-4 IF/Sound . EXT-A/V Block



AUDIO-AMP OPTION

SOUND-AMP / LOCA.NO	3.5(W) * 2-CH(TDA7057AQ)	2.7(W) * 1-CH(TDA7056B)
C611	C-FILM.PEF:50V 472-J	DELETE
C612	C-AL:50V/0.47uF	DELETE
CN601	DELETE	CONNECTOR-HEADER:BOX.3P
CN602	CONNECTOR-HEADER:BOX.4P	DELETE
CN701	CONNECTOR-HEADER:AUTO.12P	DELETE
CN703	DELETE	CONNECTOR-HEADER:AUTO.9P
D803	DIODE-RECTIFIER:FML-G02S	DELETE
D805	DELETE	DIODE-RECTIFIER:RGP-15G
IC601	DELETE	ASSY-H/S:SOUND.TDA7056B
IC602	ASSY-H/S:SOUND.TDA7057AQ	DELETE
J131	JUMPER	DELETE
J134	JUMPER	DELETE
J177	JUMPER	DELETE
R605	R-CA:1/8T 22K-J	DELETE
R606	R-CA:1/8T 3.6K-J	DELETE
R814	R-FUS:2T 0.47-J	R-FUS:2T 2.4-J
R815	R-FUS:2T 0.47-J	R-FUS:2T 2.4-J

LINE STEREO FRONT-A/V OPTION

F-A/V / LOC	LINE STEREO FRONT-A/V
CE01	C-CERAMIC:50V 101(AXIAL)
CE02	C-CERAMIC:50V 101(AXIAL)
CN701	CONNECTOR-HEADER:3WALL.3P.ANGLE
CN702	LEAD CONNECTOR-ASSY:YBNH250-11.300MM
JA701	JACK-RCA:3P.3.6MM
LE01	INDUCTOR-AXIAL:10uH-K.AL02
LE02	INDUCTOR-AXIAL:10uH-K.AL02
PCB	PCB FRONT-A/V:111.5*72*1.6T.-66
	PCB-LINE STEREO:35*51*1.6T.-1E.-2E.-3E

MONO/21PIN/LINE STEREO OPTION

SYSTEM / LOCA.NO	MONO RCA-4P	LINE STEREO RCA-6P	21-PIN SCART
C701	DELETE	C-CE:50V 101(AXIAL)	DELETE
C705	C-AL:50V 0.47uF(NP)	DELETE	C-AL:50V 0.47uF(NP)
C706	C-AL:50V 0.47uF(NP)	DELETE	C-AL:50V 0.47uF(NP)
C707	DELETE	C-AL:25V 47uF	DELETE
CN604	DELETE	POST-HEADER:6P	DELETE
CN702	DELETE	ASSY-LINE STEREO	DELETE
J195	JUMPER	DELETE	JUMPER
J177	JUMPER	DELETE	JUMPER
J186	JUMPER	DELETE	JUMPER
J111	DELETE	JUMPER	DELETE
JS701	JACK-PIN:RCA.4P	JACK-PIN:RCA.6P	JACK-RCA:21P-SCART
L701	DELETE	COIL-CHOKE:4.7uH-K	DELETE
L706	COIL-CHOKE:4.7uH-K	DELETE	COIL-CHOKE:4.7uH-K
Q704	DELETE	TRANSISTOR:KSA539-Y	DELETE
Q705	DELETE	TRANSISTOR:KSC815-Y	DELETE
R601	DELETE	R-CA:1/8T 100-J	DELETE
R712	DELETE	R-CA:1/8T 5.6K-J	DELETE
R713	DELETE	DELETE	R-CA:1/8T 5.6K-J
L704	DELETE	COIL-CHOKE:4.7uH-K	COIL-CHOKE:4.7uH-K
C704	DELETE	C-CE:50V 101(AXIAL)	C-CE:50V 101(AXIAL)
R602	DELETE	R-CA:1/8T 100-J	DELETE
R701	R-CA:1/8T 100-J	DELETE	R-CA:1/8T 100-J
R706	R-CA:1/8T 1.2K-J	DELETE	R-CA:1/8T 1.2K-J
R707	DELETE	R-CA:1/8T 470-J	DELETE
R708	DELETE	R-CS:1/8T 47K-J	DELETE
R709	DELETE	R-CA:1/8T 150-J	DELETE
R710	DELETE	R-CA:1/8T 150-J	DELETE
R711	DELETE	R-CA:1/8T 18K-J	DELETE
R712	DELETE	R-CA:1/8T 5.6K-J	DELETE
J173	DELETE	JUMPER	DELETE
J174	DELETE	JUMPER	DELETE
ASSY			
RW701	DELETE	DELETE	R-NET:33K/24K/75*3.6P
DZ701	DELETE	DELETE	DIODE-ZENER:MTZ9.1B
DZ702	DELETE	DELETE	DIODE-ZENER:MTZ9.1B
DZ703	DELETE	DELETE	DIODE-ZENER:MTZ9.1B
Q703	DELETE	DELETE	TRANSISTOR:KSA539-Y
R703	DELETE	DELETE	R-CA:1/8T 1K-J
D701	DELETE	DELETE	DIODE-S/W' 1N4148
R705	DELETE	DELETE	R-CA 1/8T 330-J
DZ705	DELETE	DELETE	DIODE-ZENER:MTZ9.1B
R716	R-CA:1/8T 24K-J	R-CA:1/8T 24K-J	DELETE

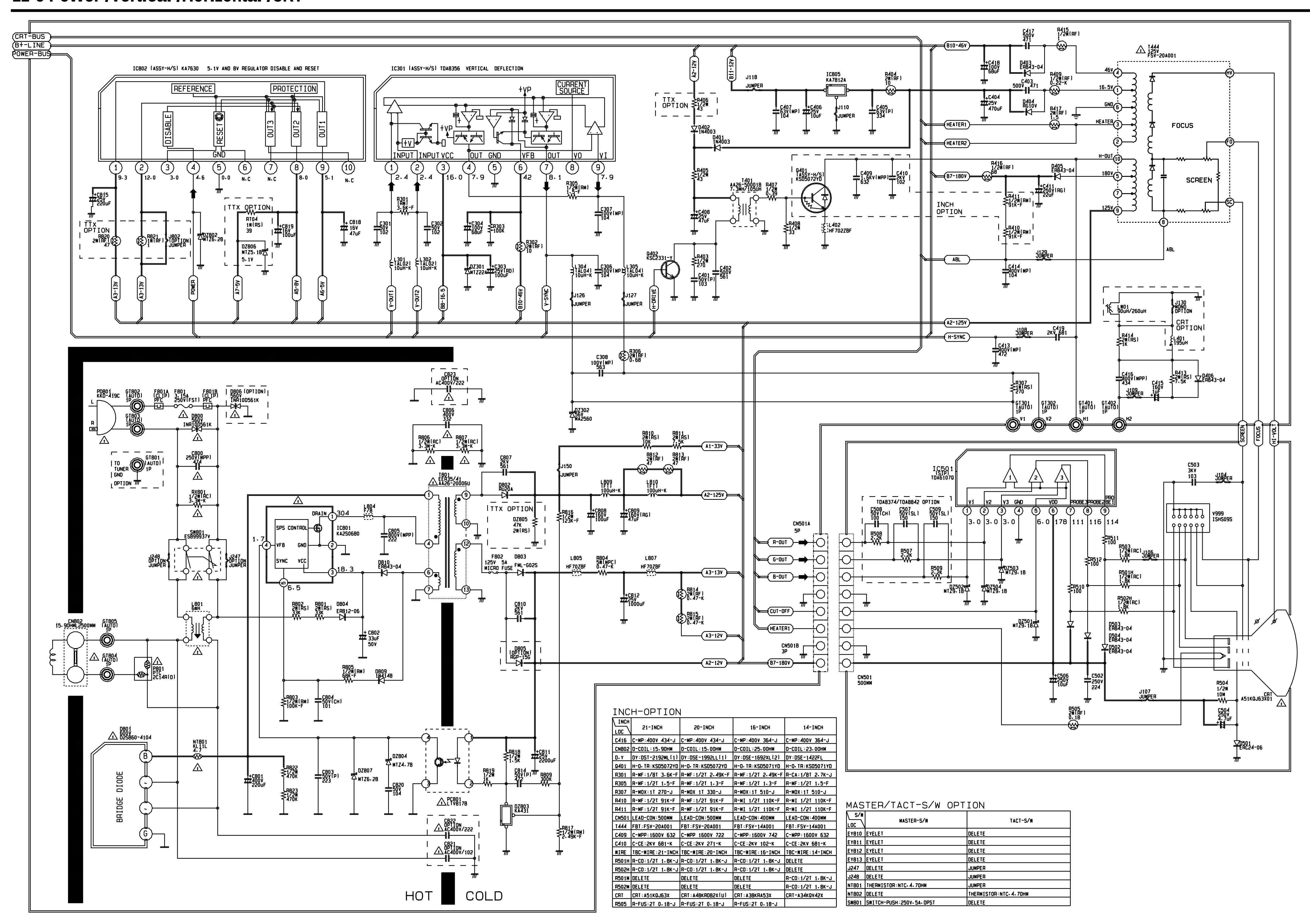
SYSTEM OPTION

SYSTEM / LOCA.NO	CS-SYSTEM	CK-SYSTEM	CB-SYSTEM
J124	JUMPER	DELETE	DELETE
RN08	R-CA:1/8T 2.2K-J	DELETE	DELETE
RN04	R-CA:1/8T 2.7K-J	DELETE	DELETE
CN02	C-CE 50V 102(AXIAL)	JUMPER	JUMPER
DN03	DIODE-S/W:BAW75	DELETE	DELETE
RN05	R-CA:1/8T 2.2K-J	DELETE	DELETE
QN05	TR-SMALL SIGNAL:BC548	DELETE	DELETE
J137	JUMPER	DELETE	DELETE
CN03	C-CE:50V 104(AXIAL)	DELETE	DELETE
RN03	R-CA:1/8T 56K-J	DELETE	DELETE
SF101	FILTER-SAW AV:K6259K	DELETE	DELETE
SFN02	DELETE	FILTER-SAW AV:K2971M	FILTER-SAW A/V:G1963M

FRONT-A/V DELETE OPTION

LOC	FRONT-A/V	DELETE
JK01	DELETE	JUMPER
C709	DELETE	C-ELEC 50V 4.7uF NP
JK03	DELETE	JUMPER
JK04	DELETE	JUMPER
J141	JUMPER	DELETE
J136	JUMPER	DELETE
J134	JUMPER	DELETE
CN701	POST-HEADER:11P.-85.-39	DELETE
	POST-HEADER:9P.-73.-38	DELETE

11-5 Power /Vertical /Horizontal /CRT



INCH-OPTION

INCH / LOC	21-INCH	20-INCH	16-INCH	14-INCH
C416	C-MP:400V 434-J	C-MP:400V 434-J	C-MP:400V 364-J	C-MP:400V 364-J
CN802	D-COIL:15.9OHM	D-COIL:15.0OHM	D-COIL:25.0OHM	D-COIL:23.0OHM
D.Y	DY:DST-2192ML(1)	DY:DSE-1992LL(1)	DY:DSE-1692XL(2)	DY:DSE-1422FL
Q401	H-O.TR:KSD5072YD	H-O.TR:KSD5072YD	H-O.TR:KSD5071YD	H-O.TR:KSD5071YD
R301	R-MF:1/8T 3.6K-F	R-MF:1/2T 2.49K-F	R-MF:1/2T 2.49K-F	R-CA:1/8T 2.7K-J
R305	R-MF:1/2T 1.5-F	R-MF:1/2T 1.3-F	R-MF:1/2T 1.3-F	R-MF:1/2T 1.5-F
R307	R-MOX:1T 270-J	R-MOX 1T 330-J	R-MOX:1T 510-J	R-MOX:1T 510-J
R410	R-MF:1/2T 91K-F	R-MF:1/2T 91K-F	R-MI 1/2T 110K-F	R-MI 1/2T 110K-F
R411	R-MF:1/2T 91K-F	R-MF:1/2T 91K-F	R-MI 1/2T 110K-F	R-MI 1/2T 110K-F
CN501	LEAD-CON:500MM	LEAD-CON:500MM	LEAD-CON:400MM	LEAD-CON:400MM
T444	FBT:FSV-20A001	FBT:FSV-20A001	FBT:FSV-14A001	FBT:FSV-14A001
C409	C-MPP:1600V 632	C-MPP 1600V 722	C-MPP:1600V 742	C-MPP:1600V 632
C410	C-CE:2KV 681-K	C-CE:2KV 271-K	C-CE:2KV 102-K	C-CE:2KV 681-K
WIRE	TBC-WIRE:21-INCH	TBC-WIRE:20-INCH	TBC-WIRE:16-INCH	TBC-WIRE:14-INCH
R501H	R-CO:1/2T 1.8K-J	R-CO:1/2T 1.8K-J	R-CO:1/2T 1.8K-J	DELETE
R502H	R-CO:1/2T 1.8K-J	R-CO:1/2T 1.8K-J	R-CO:1/2T 1.8K-J	DELETE
R501M	DELETE	DELETE	DELETE	R-CO:1/2T 1.8K-J
R502M	DELETE	DELETE	DELETE	R-CO:1/2T 1.8K-J
CRT	CRT:A51KQJ63X	CRT:A48KRD82X(U)	CRT:A38KRA53X	CRT-A34KQV42X
R505	R-FUS:2T 0.18-J	R-FUS:2T 0.18-J	R-FUS:2T 0.18-J	

MASTER/TACT-S/W OPTION

S/W / LOC	MASTER-S/W	TACT-S/W
EY810	EYELET	DELETE
EY811	EYELET	DELETE
EY812	EYELET	DELETE
EY813	EYELET	DELETE
J247	DELETE	JUMPER
J248	DELETE	JUMPER
NT801	THERMISTOR:NTC.4.7OHM	JUMPER
NT802	DELETE	THERMISTOR:NTC.4.7OHM
SW801	SWITCH-PUSH:250V.5A.DPST	DELETE

11-6 A/V Front, SUB

